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=> fil reg
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Property values tagged with IC are from the  ${\tt ZIC/VINITI}$  data file provided by  ${\tt InfoChem.}$ 

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STRUCTURE FILE UPDATES: 3 MAR 2010 HIGHEST RN 1207829-36-4
DICTIONARY FILE UPDATES: 3 MAR 2010 HIGHEST RN 1207829-36-4
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# http://www.cas.org/support/stngen/stndoc/properties.html

=> d que		
L2	20	SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON (1333-74-0/BI OR
		15318-08-8/BI OR 19553-62-9/BI OR 20791-15-5/BI OR
		310888-77-8/BI OR 310888-80-3/BI OR 310888-81-4/BI OR
		310888-82-5/BI OR 310888-85-8/BI OR 310888-87-0/BI OR
		7358-26-1/BI OR 7440-37-1/BI OR 7440-59-7/BI OR 75-24-1/BI
		OR 7727-37-9/BI OR 870126-56-0/BI OR 870126-57-1/BI OR
		870126-58-2/BI OR 870126-59-3/BI OR 97-93-8/BI)
L7	1182	SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON C19H14N2O2/MF
L9	24	SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L7 AND 8-QUIN?
L10	11	SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L9 AND QUINOLINOL
		?
L11	10	SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L10 NOT
		1H-INDOLE?
L12	1	SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 8-HYDROXYQUINOLIN
		ATE/CN
L13	1	SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 8-HYDROXYQUINOLIN
		E/CN
		SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 148-24-3/CRN
L21		SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 63969-39-1/CRN
L25		SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON 2536-71-2/CRN
L26	664194	SEA FILE-REGISTRY SPE=ON ABB=ON PLU=ON (AL OR GA OR
		ZN)/ELS
L27		SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L26 AND CCS/CI
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L29		SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L28 OR L28
L30	300000	SEA FILE=REGISTRY RAN=(173475-42-8) SPE=ON ABB=ON PLU=ON
		L28 OR L28
L31		SEA FILE=REGISTRY SPE=ON ABB=ON PLU=ON L29 NOT L30
L32		SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L12
		SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L13
		SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L14
L35	3	SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L21

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1.36
             7 SEA FILE-HCAPLUS SPE=ON ABB=ON PLU=ON L25
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            60 SEA FILE-HCAPLUS SPE-ON ABB-ON PLU-ON L11
L38
        143270 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L27
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        140282 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L30
L40
      2256613 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L31
L41
          2571 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON (L32 OR L33 OR
               L34 OR L35 OR L36 OR L37) AND (L38 OR L39 OR L40)
L42
               QUE SPE=ON ABB=ON PLU=ON CHEMICAL VAPOR DEPOSIT? OR C
               HEMICAL VAPOUR DEPOSIT? OR CVP OR VAPOR DEPOSIT? OR VAPOU
               R DEPOSIT?
L43
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       247082 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON "VAPOR DEPOSITION
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L46
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L47
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                OR OVERLAY? OR OVERLAID? OR LAMIN? OR LAMEL? OR (MULTILA
               YER?) OR SHEET? OR LEAF? OR FOIL? OR COAT? OR TOPCOAT? OR
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                ENCAS? OR ENWRAP? OR OVERSPREAD?
1.48
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L49
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L50
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L51
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L52
               L51)
1.53
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1.54
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L55
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L57
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L58
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1.59
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          1415 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L59 AND L42
L60
L61
          1210 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L60 AND L47
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L62
               L33 OR L34 OR L35 OR L36 OR L37)
             1 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L60 AND (L32 OR L33 OR L34 OR L35 OR L36 OR L37)
L63
L64
            49 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L59 AND (L32 OR
              L33 OR L34 OR L35 OR L36 OR L37)
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L66
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              OR 1.65
L68
            19 SEA FILE=HCAPLUS SPE=ON ABB=ON PLU=ON L66 OR L57
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=> fil hcap

FILE 'HCAPLUS' ENTERED AT 10:33:29 ON 05 MAR 2010

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FILE COVERS 1907 - 5 Mar 2010 VOL 152 ISS 11
FILE LAST UPDATED: 4 Mar 2010 (20100304/ED)
REVISED CLASS FIELDS (/NCL) LAST RELOADED: Dec 2009
USPTO MANUAL OF CLASSIFICATIONS THESAURUS ISSUE DATE: Dec 2009

HCAplus now includes complete International Patent Classification (IPC) reclassification data for the third quarter of 2009.

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This file contains CAS Registry Numbers for easy and accurate substance identification.

=> d 168 1-19 ibib ed abs hitstr hitind

L68 ANSWER 1 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN ACCESSION NUMBER: 2008:1127854 HCAPLUS  $\underline{\text{Full-text}}$ 

DOCUMENT NUMBER: 149:366841

TITLE: Atomic layer chemical

vapor deposition with in situ

synthesis of molecular metalorganic compounds and

uses of the resulting films Nilsen, Ola; Fjellvaag, Helmer

PATENT ASSIGNEE(S): Universitetet I Oslo, Norway SOURCE: PCT Int. Appl., 25pp.

CODEN: PIXXD2

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION:

INVENTOR(S):

		ENT				KIN		DATE									DATE	
		2008				A2		2008			WO 2						0080314	
Ţ	ΝO	2008	1118	50		A3		2009	0129									
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			ΒZ,	CA,	CH,	CN,	CO,	CR,	CU,	CZ,	DE,	DK,	DM,	DO,	DZ,	EC,	EE,	
			EG,	ES,	FI,	GB,	GD,	GE,	GH,	GM,	GT,	HN,	HR,	HU,	ID,	IL,	IN,	
			IS,	JP,	KE,	KG,	KM,	KN,	KP,	KR,	KZ,	LA,	LC,	LK,	LR,	LS,	LT,	
			LU,	LY,	MA,	MD,	ME,	MG,	MK,	MN,	MW,	MX,	MY,	MZ,	NA,	NG,	NI,	
			NO,	NZ,	OM,	PG,	PH,	PL,	PT,	RO,	RS,	RU,	SC,	SD,	SE,	SG,	SK,	
			SL,	SM,	SV,	SY,	ТJ,	TM,	TN,	TR,	TT,	TZ,	UA,	UG,	US,	UZ,	VC,	
			VN,	ZA,	ZM,	ZW												
		RW:	ΑT,	BE,	BG,	CH,	CY,	CZ,	DE,	DK,	EE,	ES,	FI,	FR,	GB,	GR,	HR,	
			HU,	ΙE,	IS,	ΙT,	LT,	LU,	LV,	MC,	MΤ,	NL,	NO,	PL,	PT,	RO,	SE,	
			SI,	SK,	TR,	BF,	ΒJ,	CF,	CG,	CI,	CM,	GA,	GN,	GQ,	GW,	ML,	MR,	
			NE,	SN,	TD,	TG,	BW,	GH,	GM,	KE,	LS,	MW,	ΜZ,	NA,	SD,	SL,	SZ,	
			TZ,	UG,	ZM,	ZW,	ΑM,	ΑZ,	BY,	KG,	ΚZ,	MD,	RU,	ТJ,	TM,	ΑP,	EA,	
			EP,	OA														
PRIOR:	ITY	APP	LN.	INFO	. :						NO 2	007-	1400		- 2	A 2	0070315	

ED Entered STN: 19 Sep 2008

- AB Methods for preparing thin films comprising mol. metalorg, compds, on a substrate using an atomic layer gas phase deposition technique are described which entail contacting the substrate with a pulse of an inorg, precursor selected from a group consisting of metal alkyls, metal cycloalkyls, metal aryls, metal amines, metal silylamines, metal halogenides, metal carbonyls, and metal chelates; reacting the inorg, precursor with an organic compound present on at least one surface of the substrate or adsorbing the inorg. precursor on at least one surface of the substrate; removing any nonadsorbed or unreacted inorg, precursors and reaction byproducts; contacting the inorg. precursor on the surface of the substrate with a pulse of an organic precursor with at least one functional group capable of a chemical reaction with an inorg, precursor; reacting the organic precursor with the inorg, compound adsorbed on the surface or adsorbing the organic precursor; removing any nonadsorbed or unreacted organic precursors; and optionally repeating the preceding steps until a desired film thickness is achieved. A layer of metalorg, compds, is formed in either one of the reaction steps. The metal is selected from Al, Ga, In, Tl, Si, Ge, Sn, Pb, As, Sb, Bi, Te, Po, alkali metals, alkaline earth metals, 3d metals, 4d metals, 5d metals, lanthanides, and actinides. Substrates provided with the films are also described, as is the use of the films as a semiconductive material in organic light-emitting device applications (including displays).
- 148-24-3, 75-24-1, Trimethylaluminum
- 8-Hydroxyquinoline, processes
  - (atomic layer chemical vapor
  - deposition with in situ synthesis of mol. metalorg. compds.
- and uses of resulting films) 75-24-1 HCAPLUS
- RN
- CN Aluminum, trimethyl- (CA INDEX NAME)

- 148-24-3 HCAPLUS RN
- 8-Quinolinol (CA INDEX NAME)



- CC 75-1 (Crystallography and Liquid Crystals)
- Section cross-reference(s): 73, 74, 76, 78
- atomic laver chem vapor
  - deposition metalorg compd film; electroluminescent device display atomic layer CVD metalorg film
- Silanes
  - (amino, metal compds.; atomic layer chemical vapor deposition with in situ synthesis of mol. metalorg. compds. and uses of resulting films)
- Semiconductor films
  - (atomic layer chemical vapor

deposition with in situ synthesis of mol. metalorg. compds. and uses of resulting films)

Actinide compounds

Alkali metal compounds

Alkaline earth compounds Rare earth compounds

Transition metal compounds

(atomic layer chemical vapor

deposition with in situ synthesis of mol. metalorg. compds. and uses of resulting films)

Carbonyl complexes

Coordination compounds

Halides

(atomic layer chemical vapor

deposition with in situ synthesis of mol. metalorg. compds. and uses of resulting films)

ΤТ Chemical vapor deposition

(atomic layer; atomic layer chemical

vapor deposition with in situ synthesis of mol.

metalorg. compds. and uses of resulting films)

Electroluminescent devices

(displays, organic; atomic layer chemical vapor

deposition with in situ synthesis of mol. metalorg. compds.

and uses of resulting films) Luminescent screens

(electroluminescent, organic; atomic layer chemical vapor deposition with in situ synthesis of mol.

metalorg. compds. and uses of resulting films)

Amines, processes

(metal compds.; atomic layer chemical vapor

deposition with in situ synthesis of mol. metalorg. compds. and uses of resulting films)

Electroluminescent devices

(organic; atomic layer chemical vapor

deposition with in situ synthesis of mol. metalorg. compds. and uses of resulting films)

Amines, processes

(silyl, metal compds.; atomic layer chemical vapor deposition with in situ synthesis of mol.

metalorg. compds. and uses of resulting films)

7439-92-1DP, Lead, compds. 7440-08-6DP, Polonium, compds.

7440-21-3DP, Silicon, compds. 7440-28-0DP, Thallium, compds.

7440-31-5DP, Tin, compds. 7440-36-0DP, Antimony, compds.

7440-38-2DP, Arsenic, compds. 7440-55-3DP, Gallium, compds.

7440-56-4DP, Germanium, compds. 7440-69-9DP, Bismuth, compds. 7440-74-6DP, Indium, compds. 13494-80-9DP, Tellurium, compds.

(atomic laver chemical vapor

deposition with in situ synthesis of mol. metalorg. compds. and uses of resulting films)

555-32-8P 2085-33-8P, Tris(8-hydroxyquinolinato)aluminum

13978-85-3P, Bis(8-hydroxyquinolinato)zinc 17500-80-0P (atomic layer chemical vapor deposition with in situ synthesis of mol. metalorg. compds.

and uses of resulting films) 7732-18-5, Water, processes 10028-15-6, Ozone, processes (atomic layer chemical vapor

deposition with in situ synthesis of mol. metalorg. compds. and uses of resulting films)

65-85-0, Benzoic acid, processes 75-24-1,

Trimethylaluminum 148-24-3, 8-Hydroxyquinoline, processes

557-20-0, Diethylzinc 7439-89-6D, Iron, compds. 7439-95-4D, Magnesium, compds. 7439-96-5D, Manganese, compds. 7440-6-4D, Platinum, compds. 7440-47-3D, Chromium, compds. 7440-48-4D, Cobalt, compds. 7440-50-8D, Copper, compds. 7440-62-2D, Vanadium,

compds. 7550-45-0, Titanium tetrachloride, processes

(atomic layer chemical vapor

deposition with in situ synthesis of mol. metalorg. compds. and uses of resulting films)

L68 ANSWER 2 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN ACCESSION NUMBER: 2008:379801 HCAPLUS Full-text

DOCUMENT NUMBER: 148:415641

TITLE: Transfer material for electronic device, method of

forming insulating layer and partition

wall of electronic device, and light-emitting

element
INVENTOR(S): Tateishi, Tomomi

PATENT ASSIGNEE(S): Fujifilm Corporation, Japan

SOURCE: U.S. Pat. Appl. Publ., 25 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

LANGUAGE: English
FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

DATE	
0070918	
0060927	
0060927	
0	

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 28 Mar 2008

AB The present invention provides a transfer material with a strong adhesiveness for an electronic device that includes a transfer support and, provided on the support in this order, an insulating layer or a partition wall material layer, and a layer containing an organic low-mol.-weight compound having charge transportability; a method of forming an insulating layer and a partition wall of an electronic device using the transfer material; and a light-emitting element.

IT 148-24-3D, 8-Quinolinol, derivs. 2085-33-8, Alg3

(transfer material for electronic device, method of forming insulating layer and partition wall of electronic device,

and light-emitting element)

RN 148-24-3 HCAPLUS

CN 8-Ouinolinol (CA INDEX NAME)



CN Aluminum, tris(8-quinolinolato-KN1, KO8)- (CA INDEX NAME)

INCL 428141000; 156230000; 428172000

CC 76-3 (Electric Phenomena)

Section cross-reference(s): 48, 73

ST transfer electronic device insulating layer partition wall LED fabrication

IT Cluster ions

(beams; transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

IT Anhydrides

(dianhydrides; transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

IT Vapor deposition process

(ion plating; transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

Materials

(organic; transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

T Chemical vapor deposition

(photochem.; transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

IT Polymerization

Vapor deposition process

(plasma; transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

IT Acrylic polymers

(polysiloxane-, US-3700; transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

IT Conducting polymers

(polythiophenes; transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

IT Chemical vapor deposition

Coating process Dielectric films Electroluminescent devices Holders

Molecular beam epitaxy Reactive sputtering Release films Semiconductor device fabrication Sputtering Transfers

(transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

IT Metallophthalocyanines

Polyanilines Polvesters

Polyesters Polyphenyls

(transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

II Vapor deposition process

(vacuum; transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)

- (IT 67-63-0, Isopropyl alcohol, processes 78-93-3, Methyl ethyl ketone, processes 108-88-3, Toluene, processes 58328-31-7 60676-86-0, Vitreous silica 475644-38-3, Optool DSX 757974-86-0, TFR-H (transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)
- IT 50926-11-9, Indium tin oxide 128770-43-4, HP 320 (polyester) (transfer material for electronic device, method of forming insulating layer and partition wall of electronic device, and light-emitting element)
- IT 90-44-8D, Anthrone, derivs. 92-52-4D, Biphenyl, quinone derivs. 147-14-8, Copper phthalocyanine 148-24-3D, 8-Quinolinol, derivs. 151-51-9D, Carbodiimide, derivs. 273-53-0D, Benzoxazole, metal complexes 288-42-6D, Oxazole, derivs. 288-88-0D, Benzoxazole, 1H-1,2,4-Triazole, derivs. 486-25-9D, Fluorenone, derivs. 574-53-6D, Phthalocyanine, derivs. 2085-33-8, Alq3 4425-82-5D, Fluorenylidenemethane, derivs. 7789-24-4, Lithium fluoride, processes 11120-54-0D, Oxadiazole, derivs. 12597-68-1, Stainless steel, processes 14990-02-4D, derivs. 2538-59-9, Lumirror T-6D, processes 6475-0D-5D, Thiopyran, derivs. 70359-33-6D, derivs. 85270-88-5D, Polyfuorene, derivs. 96638-49-2D, Polyphenylenevinylene, derivs. 123847-85-8 380234-99-1, ZDN 1100 693794-99-8 (transfer material for electronic device, method of forming

(transfer material for electronic device, method of formininsulating layer and partition wall of electronic device, and light-emitting element)

OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)

L68 ANSWER 3 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN ACCESSION NUMBER: 2007:970780 HCAPLUS Full-text

DOCUMENT NUMBER: 147:332672

TITLE: Blue-emitting doped lithium quinolate electroluminescent materials and related

electroluminescent devices
INVENTOR(S): Kathirgamanathan, Poopathy; G

WENTOR(S): Kathirgamanathan, Poopathy; Ganeshamurugan, Subramaniam; Kumaraverl, Muttulingham; Partheepan,

Arumugam; Paramaswara, Gnanamoly
PATENT ASSIGNEE(S): Merck Patent GmbH, Germanv

SOURCE: U.S. Pat. Appl. Publ., 29 pp., Cont.-in-part of

Appl. No. PCT/GB06/000441.

CODEN: USXXCO Patent English

DOCUMENT TYPE: LANGUAGE:

FAMILY ACC. NUM. COUNT: 4

PATENT INFORMATION:

	TENT :	.00			KIN		DATE			ICAT				D.	ATE
US	2007	0200	096		A1		2007			2007-				2	00704
WO	2000	0327	17		A1		2000	0608	wo 1	999-		24		1	99912
	W:									BR,	BY,				
										GH,					
										LK,					
										PT,				SE,	
			SK,			TM,	TR,			US,					
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				CG,						MR,			TD,		
WO	2003	0461	07		A1		2003	0605	WO 2	2002-	GB52 	68		2	00211
	W:									BG,					
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			TN,							VN,					
	RW:									TZ,				AM,	
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US	2005			CF,	A1			0519		2004-			NE,		00405
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WO	2006	0875	21		A1		2006	0824	WO 2	-6009	GB44 	1		2	00602
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RIT	Y APP	ZW,			ы,				WO 1	999- - - 	 GB40  8573	24	1	w 1:	
RIT	f APP	ZW,			ы,				WO 1	999- - - 	 GB40  8573	24	1	W 1	99912

WO	2002-GB5268	W	20021122
US	2004-496416	A2	20040522
GB	2005-3393	A	20050218
US	2005-140338	A2	20050527
WO	2006-GB441	A2	20060209

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT
OTHER SOURCE(S): MARPAT 147:332672

- D Entered STN: 31 Aug 2007
- AB Electroluminescent composition is provided comprising (a) lithium quinolate or substituted quinolate exhibiting a blue electroluminescence and being the result of reaction between a lithium alkyl or alkoxide with 8-hydroxy quinoline or a substituted derivative thereof in a solvent which comprises acetonitrile and (b) a dopant. Also provided is an electroluminescent device which comprises sequentially (i) a first electrode (ii) a layer of an electroluminescent material which comprises lithium quinolate or substituted quinolate doped with a dopant and (iii) a second electrode.
- IT 148-24-3, 8-Hydroxyquinoline, reactions

(blue-emitting doped lithium quinolate electroluminescent materials and related electroluminescent devices)

- RN 148-24-3 HCAPLUS
- CN 8-Quinolinol (CA INDEX NAME)



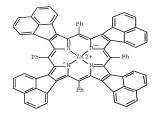
TT 21302-84-1 262280-95-5

(blue-emitting doped lithium quinolate electroluminescent materials and related electroluminescent devices)

- RN 21302-84-1 HCAPLUS
- CN 8-Quinolinol, zirconium(4+) salt (4:1) (CA INDEX NAME)



- ●1/4 Zr(IV)
- RN 262280-95-5 HCAPLUS
- CN Zinc, [8,17,26,35-tetraphenyl-37H,39H-tetraacenaphtho[1,2-b:1',2'-g:1'',2''-1:1''',2'''-q]porphinato(2-)κN37,κN38,κN39,κN40]-, (SP-4-1)- (CA INDEX NAME)



TT 25387-93-3P

(doped electroluminescent material; blue-emitting doped lithium quinolate electroluminescent materials and related electroluminescent devices)

RN 25387-93-3 HCAPLUS

CN 8-Quinolinol, lithium salt (1:1) (CA INDEX NAME)

● L

INCL 252301160; 313483000

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 25, 29, 76, 78

T Vapor deposition process

(vacuum co-sublimation of lithium quinolate and dopant; blue-emitting doped lithium quinolate electroluminescent materials and related electroluminescent devices)

IT 109-04-6, 2-Bromopyridine 109-72-8, n-Butyllithium, reactions 148-24-3, 8-Hydroxyquinoline, reactions 1137-68-4, 2-2-Pyridyl-benzimidazole 10025-83-9, Iridium trichloride

98437-23-1 (blue-emitting doped lithium quinolate electroluminescent materials

and related electroluminescent devices)
IT 147-14-8, Copper phthalocyanine 4733-39-5, BCP 21302-84-1
21392-78-9 262280-95-5

(blue-emitting doped lithium quinolate electroluminescent materials and related electroluminescent devices)

IT 25387-93-3P

(doped electroluminescent material; blue-emitting doped lithium

quinolate electroluminescent materials and related

electroluminescent devices)

7789-24-4, Lithium fluoride, uses

(electron injection layer; blue-emitting doped lithium quinolate electroluminescent materials and related electroluminescent devices)

124729-98-2

(hole-transporting layer; blue-emitting doped lithium quinolate electroluminescent materials and related

electroluminescent devices)

OS.CITING REF COUNT: 0 THERE ARE 0 CAPLUS RECORDS THAT CITE THIS RECORD (0 CITINGS)

L68 ANSWER 4 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN ACCESSION NUMBER: 2007:485383 HCAPLUS Full-text

DOCUMENT NUMBER: 146:473281

TITLE: Method for producing a layer consisting

CODEN: PIXXD2

Patent

of doped organic material on a substrate by means of deposition from a common evaporation source

Werner, Ansgar; Leo, Karl; Boettcher, Horst; INVENTOR(S): Woehrle, Dieter; Thiel, Carolin; Wark, Michael

PATENT ASSIGNEE(S): Novaled A.-G., Germany SOURCE: PCT Int. Appl., 18pp.

DOCUMENT TYPE:

LANGUAGE: German

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	PATENT NO.						DATE								_	ATE	
	2007										006-						
	W:	CH, GB, KG, MA, PG, SY,	CN, GD, KM, MD, PH, TJ,	CO, GE, KN, MG, PL, TM,	CR, GH, KP, MK, PT, TN,	CU, GM, KR, MN, RO, TR,	AU, CZ, GT, KZ, MW, RS, TT,	DE, HN, LA, MX, RU, TZ,	DK, HR, LC, MY, SC, UA,	DM, HU, LK, MZ, SD, UG,	BG, DZ, ID, LR, NA, SE, US,	BR, EC, IL, LS, NG, SG, UZ,	EE, IN, LT, NI, SK, VC,	EG, IS, LU, NO, SL, VN,	ES, JP, LV, NZ, SM, ZA,	FI, KE, LY, OM, SV, ZM,	zw
EP	RW:	IE, BF, TG, ZW,	IS, BJ, BW, AM,	IT, CF, GH, AZ,	LT, CG, GM, BY,	LU, CI, KE, KG,	CZ, LV, CM, LS, KZ, 2007	MC, GA, MW, MD,	NL, GN, MZ, RU,	PL, GQ, NA, TJ,	PT, GW, SD, TM	RO, ML, SL,	SE, MR, SZ,	SI, NE, TZ,	SK, SN, UG,	TR, TD, ZM,	028
EP	1783 R:	AT, IE,	BE,	BG, IT,	CH, LI,	CY, LT,	CZ, LU,	DE,			ES,	FI,					
JP	2009							0402		JP 2		5370	09		2	0061	027
KR	2008	0733	06		A		2008	0808		KR 2	008-		59		2	0080	527
PRIORIT	Y APP	LN.	INFO	.:						EP 2	005-		5		A 2	0051	028
										WO 2	006-		368	1	W 2	0061	027

ED Entered STN: 04 May 2007

- AB The invention relates to a method for producing a layer consisting of a doped organic material on a substrate by means of deposition, the doped organic material containing at least one matrix material and at least one doping material. The inventive method is characterized in that a mixture of the matrix material and the doping material in a common evaporation source is transformed into a vapor phase and deposited onto the substrate, at least one of the matrix material or the doping material being inserted into a porous carrier substance before being transformed into the vapor phase. The invention also relates to the use of 1 such method.
- IT 1344-28-1, Alumina, uses 7784-36-7, Aluminum

phosphate

(matrix material; method for producing a layer consisting of doped organic material on a substrate by means of deposition from a common evaporation source)

RN 1344-28-1 HCAPLUS

CN Aluminum oxide (Al2O3) (CA INDEX NAME)

\*\*\* STRUCTURE DIAGRAM IS NOT AVAILABLE \*\*\*

RN 7784-30-7 HCAPLUS

CN Phosphoric acid, aluminum salt (1:1) (CA INDEX NAME)

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- IT 148-24-3, 8-0xyquinoline, uses 2985-33-8, Alq3
  (method for producing a layer consisting of doped organic
  material on a substrate by means of deposition from a common evaporation
  source)
- RN 148-24-3 HCAPLUS
- CN 8-Ouinolinol (CA INDEX NAME)



- RN 2085-33-8 HCAPLUS
- CN Aluminum, tris(8-quinolinolato-KN1, KO8)- (CA INDEX NAME)



CC 76-2 (Electric Phenomena)

Section cross-reference(s): 52, 73

ST vapor deposition doped org material solar cell

electroluminescent device

IT Sol-gel processing

(coating; method for producing a layer

consisting of doped organic material on a substrate by means of deposition from a common evaporation source)

IT Molecular sieves

(matrix material; method for producing a layer consisting of doped organic material on a substrate by means of deposition from a

common evaporation source)

IT Zeolites (synthetic)

(matrix material; method for producing a layer consisting

of doped organic material on a substrate by means of deposition from a common evaporation source)

IT Doping

Hybrid organic-inorganic materials

Vapor deposition process

(method for producing a layer consisting of doped organic

material on a substrate by means of deposition from a common evaporation source)

IT Electric conductors

Electroluminescent devices

Materials

Solar cells

(organic; method for producing a layer consisting of doped

organic material on a substrate by means of deposition from a common evaporation source)

IT Coating process

(sol-gel; method for producing a layer consisting of

doped organic material on a substrate by means of deposition from a common evaporation source)

IT 1314-23-4, Zirconia, uses 1344-28-1, Alumina, uses

7631-86-9, Silica, uses 7784-30-7, Aluminum phosphate

12736-95-7, Aluminum phosphate silicate 13463-67-7, Titania, uses (matrix material; method for producing a layer consisting

of doped organic material on a substrate by means of deposition from a common evaporation source)

T 148-24-3, 8-Oxyquinoline, uses 517-51-1, Rubrene

2085-33-8, Alg3

(method for producing a layer consisting of doped organic

material on a substrate by means of deposition from a common evaporation source)

OS.CITING REF COUNT: 2 THERE ARE 2 CAPLUS RECORDS THAT CITE THIS RECORD (2 CITINGS)

REFERENCE COUNT: 6 THERE ARE 6 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE REFORMAT

L68 ANSWER 5 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN ACCESSION NUMBER: 2006:36976 HCAPLUS Full-text

DOCUMENT NUMBER: 144:117522

TITLE: Method of manufacturing organic thin film element, method of manufacturing electro-optic

device, and method of manufacturing electronic equipment

INVENTOR(S): Takakuwa, Atsushi; Shimoda, Tatsuya; Furusawa,

Masahiro; Mitani, Tadaoki; Yamaguchi, Hisato
PATENT ASSIGNEE(S): Seiko Epson Corporation, Japan; Tadaoki Mitani

SOURCE: U.S. Pat. Appl. Publ., 18 pp.

CODEN: USXXCO

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PRI

	PAT	TENT NO.	KIND	DATE	APPLICATION NO.	DATE
	US	20060007520	A1	20060112	US 2005-141108	20050601
					<	
	JP	2006024535	A	20060126	JP 2004-203917	20040709
IOI	RITY	APPLN. INFO.:			JP 2004-203917 A	20040709

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 13 Jan 2006

- An Amethod of manufacturing an organic thin film element including an organic thin film between a pair of thin film electrodes with ≥1 transparent electrode includes forming the transparent electrode by atomizing a material liquid containing a transparent-electrode forming material onto a base material; and forming the organic thin film on the transparent electrode. The organic thin film element is capable of simply providing an organic thin film element having a long element life. A method of manufacturing an electrooptic device as well as a method of manufacturing electronic equipment by using the above method are described.
- IT 148-24-3, 8-Quinolinol, uses 2085-33-8,

Tris(8-hydroxyquinolinato)aluminum
(organic film electrodes manufacturing with)

RN 148-24-3 HCAPLUS

CN 8-Quinolinol (CA INDEX NAME)

RN 2085-33-8 HCAPLUS

CN Aluminum, tris(8-quinolinolato-KN1, KO8)- (CA INDEX NAME)



INCL 359275000

73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 22, 76

org film element electrooptic device electronic equipment manuf

Aromatic hydrocarbons, uses (alkyl, polymers; organic film electrodes manufacturing with)

Amines, uses Polyesters, uses

Polymers, uses (aromatic; organic film electrodes manufacturing with)

Anhydrides

(heterocycle; organic film electrodes manufacturing with)

Film electrodes

(manufacturing with organic films)

Luminescence, electroluminescence Spraving

Sputtering

(of organic film electrodes)

Self-assembled monolayers

(organic film electrodes manufacturing with)

ΙT Acrylic polymers, uses

Borate glasses

Borosilicate glasses

Coumarins Glass, uses

Hydrazones

Phosphate glasses Phosphosilicate glasses

Polvanilines

Polycarbonates, uses

Polyesters, uses

Polysilanes

Rare earth metals, uses

Silazanes

Silicate glasses

(organic film electrodes manufacturing with)

Films

(organic; electrodes manufacturing with)

Polysulfones, uses

(polyether-; organic film electrodes manufacturing with)

Polyethers, uses

(polysulfone-; organic film electrodes manufacturing with)

Conducting polymers

(polythiophenes: organic film electrodes manufacturing with)

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IT Electrodes
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(transparent; organic film electrodes manufacturing with)

IT Electronics

Electrooptical instruments

(using organic films)

IT 51-17-2, Benzimidazole 80-05-7, Bisphenol A, uses 84-65-1D, Anthraquinone, derivs. 86-73-7D, Fluorene, alkyl derivs. polymers 90-44-8, Anthrone 94-41-7D, Chalcone, amino substitution derivative 95-16-9, Benzothiazole 106-51-4D, Quinone, derivs. 110-02-1D, Thiofuran, oligomers 148-24-3, 8-Quinolinol, uses 198-55-0D, Perylene, derivs. 273-53-0, Benzoxazole 288-32-4,

198-55-0D, Perylene, derivs. 273-53-0, Benzoxazole 288-32-4, Imidazole, uses 288-42-6, Oxazole 288-88-0, IH-1,2,4-Triazole 289-72-5D, Thiopyran, derivs. 290-37-9D, Pyrazine, styryl derivs.

269-72-50, Intopyran, derivs. 290-37-90, Pyrazine, styryi derivs. 486-25-9, Fluorenone, derivs. 588-59-0, Stilbene 919-30-2, Aminopropyltriethoxysilane 2085-33-8,

Tris (8-hydroxyquinolinato)aluminum 4425-82-5, Fluorenylidene methane 7439-93-2, Lithium, uses 7439-95-4, Magnesium, uses 7440-23-5, Sodium, uses 7440-74-6, Indium, uses 9003-53-6, Polystyrene

9011-14-7, PMMA 11120-54-0, Oxadiazole 12033-89-5, Šilicon nitride, uses 25038-59-9, uses 25067-59-8, Polyvinylcarbazole 25087-26-7, Polymethacrylic acid 25265-76-3, Phenylenediamine 36118-45-3, Pyrazoline 37271-44-6 39455-90-8, Pyrazolone

42559-81-9, Anthracene-styrene copolymer 60676-86-0, Silica glass 65181-78-4, TPD (photoreceptor) 96638-49-2, Polyphenylenevinylene (organic film electrodes manufacturing with)

L68 ANSWER 6 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN ACCESSION NUMBER: 2005:345979 HCAPLUS Full-text

DOCUMENT NUMBER: 142:381971

TITLE: Organic electroluminescent devices employing an organometallic complex-containing layer

organometallic complex-containing layer adjacent to a reducing metal and fabrication process of electroluminescent devices

ADDITED TO THOM NO

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DATE

INVENTOR(S): Kido, Junji; Matsumoto, Toshio; Nakada, Takeshi;

Kawamura, Norifumi

PATENT ASSIGNEE(S): International Manufacturing and Engineering

Services Co., Ltd., Japan SOURCE: Eur. Pat. Appl., 33 pp.

CODEN: EPXXDW Patent

PIND DATE

DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

Ρ.	AJ	ENI	NO.			KIM	)	DATE		APPL	ICAI	TON .	NO.	D.	AIE	
E	P	1524	1707			A2	-	2005	0420	EP 2	004-	2461	1	 2	0041015	
E	P	1524	1707			A3		2006	0426							
		R:	PT,	IE,	SI,			ES, FI,								
J	P	2005	1230	SK, 94	HK	A		2005	0512	JP 2	003-	3584	01	2	0031017	
C	N	1610	1473			A		2005	0427	CN 2	004-	1008	0504	2	0040930	
U	S	2005	0084	713		A1		2005	0421	US 2	004-	9667	08	2	0041015	
K	R	2005	0374	00		Α		2005	0421	KR 2	004-		3	2	0041018	

KR 858106 PRIORITY APPLN. INFO.: B1 20080910

JP 2003-358401

A 20031017

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 22 Apr 2005

- ED Entered STN: 22 Apr 2005

  Organic electrocluminescent devices are described which comprise a substrate, an anode layer; an organic structure including at least one light-emissive layer; a low resistance electron-transporting layer including a mixed layer of an electron-donating metal dopant and an organic compound; an organometallic complex-containing layer including an organometallic complex compound containing at least one metal ion selected from an alkaline metal ion, an alkaline earth metal ion and a rare earth metal ion; a reducing reaction generating layer; and a cathode layer, in that order. At least one of the anode layer and the cathode layer is transparent. The reducing reaction generating layer is a layer produced by depositing on the organometallic complex-containing layer a thermally reducible metal capable of reducing the metal ion in the organometallic complex compound in a vacuum to the corresponding metal, followed by causing an oxidation-reduction reaction between them.
- IT 25387-93-3

(organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

- RN 25387-93-3 HCAPLUS
- CN 8-Ouinolinol, lithium salt (1:1) (CA INDEX NAME)

● Li

- IT 2085-33-8, Aluminum tris(8-hydroxyquinolinato) (organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)
- RN 2085-33-8 HCAPLUS
- CN Aluminum, tris(8-quinolinolato-KN1, KO8)- (CA INDEX NAME)

IT 7429-90-5, Aluminum, uses

(thermally reducible metal; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

RN 7429-90-5 HCAPLUS

CN Aluminum (CA INDEX NAME)

A1

IC ICM H01L051-20

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties Section cross-reference(s): 76

IT Organometallic compounds

(alkaline earth compds.; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

IT Organometallic compounds

(alkali metal compds.; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

T Sputtering

(cathode deposition by; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

I Vapor deposition process

(electron-beam, thermally reducible metal deposition by; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

II Vapor deposition process

(laser ablation, thermally reducible metal deposition by; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

IT Electroluminescent devices

Semiconductor device fabrication

(organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

IT Coordination compounds

Organometallic compounds

(organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

IT Alkali metals, uses

Alkaline earth metals

Rare earth metals, uses

(organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal resulting in formation of)

Alkali metal compounds

Alkaline earth compounds

Rare earth compounds

(organometallic compds.; organic electroluminescent devices employing

organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

Organometallic compounds

(rare earth compds.; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

Vapor deposition process

(resistive heating; organic electroluminescent devices employing organometallic complex-containing laver adjacent to reducing metal and fabrication process of electroluminescent devices)

ΙT Reduction

> (thermal; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

50926-11-9, Indium tin oxide

(electrode; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

123847-85-8, α-NPD

(hole-transporting layer; organic electroluminescent devices employing organometallic complex-containing laver adjacent to reducing metal and fabrication process of electroluminescent devices)

IΤ 25387-93-3

> (organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

2085-33-8, Aluminum tris(8-hydroxyquinolinato)

Bathocuproine 7440-46-2, Cesium, uses (organic electroluminescent devices employing organometallic

complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

7439-93-2P, Lithium, uses

(organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

ΤТ 7429-90-5, Aluminum, uses

> (thermally reducible metal; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

7440-21-3, Silicon, uses 7440-32-6, Titanium, uses 7440-33-7, Tungsten, uses 7440-67-7, Zirconium, uses

> (thermally reducible metal; organic electroluminescent devices employing organometallic complex-containing layer adjacent to reducing metal and fabrication process of electroluminescent devices)

OS.CITING REF COUNT:

THERE ARE 2 CAPLUS RECORDS THAT CITE THIS 2

RECORD (8 CITINGS)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD, ALL CITATIONS AVAILABLE IN THE

RE FORMAT L68 ANSWER 7 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN 142:381970

ACCESSION NUMBER: DOCUMENT NUMBER:

TITLE:

Organic electroluminescent devices employing a mixed hole injection layer of a metal oxide and an organic compound formed by

co-deposition

2005:345978 HCAPLUS Full-text

INVENTOR(S): Kido, Junji; Matsumoto, Toshio; Nakada, Takeshi;

Kawamura, Norifumi

PATENT ASSIGNEE(S): International Manufacturing and Engineering

Services Co., Ltd., Japan; Mitsubishi Heavy Industries, Ltd.

SOURCE: Eur. Pat. Appl., 50 pp.

CODEN: EPXXDW DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	ENT 1				KIN	D	DATE		APE	P.	ICAT	ION I	NO.		ATE
	1524				A2		2005		EP	20		2461	0		0041015
EP	1524	706			A3		2006	0510							
	R:	PT,		SI,			ES, FI,								
JP	2005				A		2005	0512	JP	20	003-	3584	02	2	0031017
CN	1610	470			A		2005	0427	CN	20		1008	0503	2	0040930
	10046				C		2009			~	004-			_	0041015
	2005		90						KK	21		8284 	4	2	0041015
	89430				В1		2009								
US	2005	0084	712		A1		2005	0421	US	20	004-! ->	9662. 	51	2	0041015
JP	2010	0345	94		A		2010	0212	JP	20		2580: 	54	2	0091111
RIT	APPI	LN.	INFO	. :					JΡ	20	003-	3584	02	 A 2	0031017

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT OTHER SOURCE(S): MARPAT 142:381970

- ED Entered STN: 22 Apr 2005
- AB An organic electroluminescent device includes an anode electrode layer; a cathode electrode layer opposed to the anode electrode layer; a hole injection layer provided adjacent to the anode electrode layer an organic structure including at least one light-emissive layer or at least one light-emissive unit having at least one light-emissive layer; between the anode electrode layer and the cathode electrode layer; where at least one of the anode electrode layer and the cathode electrode layer is transparent; and the hole injection layer includes a mixed layer of a metal oxide and an organic compound formed by co-deposition.
  - IT 2085-33-8, Aluminum tris(8-hydroxyquinolinato)
  - 7429-90-5, Aluminum, uses 25387-93-3

(organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound formed by co-deposition)

- RN 2085-33-8 HCAPLUS
- CN Aluminum, tris(8-quinolinolato-KN1, KO8)- (CA INDEX NAME)



RN 7429-90-5 HCAPLUS

CN Aluminum (CA INDEX NAME)

A1

RN 25387-93-3 HCAPLUS

CN 8-Quinolinol, lithium salt (1:1) (CA INDEX NAME)



● L:

IC ICM H01L051-20

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

Section cross-reference(s): 76

ST org electroluminescent device mixed hole injection oxide org

IT Sputtering

(anode deposition by; organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound formed by co-deposition)

IT Amines, uses

(aromatic; organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound formed by co-deposition)

Vapor deposition process

(electron-beam, oxide deposition using; organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound formed by co-deposition)

IT Vapor deposition process

(laser ablation, oxide deposition using; organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound formed by co-deposition)

IT Electroluminescent devices

(organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound formed by co-deposition)

IT Oxides (inorganic), uses

Porphyrins

(organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound formed by co-deposition)

IT Vapor deposition process

(resistive heating; organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound

formed by co-deposition)

IT 574-93-6D, Phthalocyanine, derivs. 2085-33-8, Aluminum tris(8-hydroxyquinolinato) 4733-39-5, Bathocuproine

7429-90-5, Aluminum, uses 7440-46-2, Cesium, uses

25387-93-3 50926-11-9, Indium tin oxide (organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound formed by

co-deposition)
II 1314-62-1, Vanadium pentoxide, properties 1314-68-7, Rhenium oxide
(Re207) 123847-85-8, α-NPD 185690-41-9, 2-TNATA

189363-47-1 404001-42-9

(organic electroluminescent devices employing mixed hole injection layer of metal oxide and organic compound formed by

co-deposition)
OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS

RECORD (13 CITINGS)

REFERENCE COUNT: 3 THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L68 ANSWER 8 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN ACCESSION NUMBER: 2004:508931 HCAPLUS Full-text

DOCUMENT NUMBER: 141:57069

TITLE: Method of fabrication of large-area solar

photovoltaic devices

INVENTOR(S): Duggal, Anil Raj; Yakimov, Aharon
PATENT ASSIGNEE(S): General Electric Company, USA
SOURCE: U.S. Pat. Appl. Publ., 13 pp.

CODEN: USXXCO
DOCUMENT TYPE: Patent
LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
US 20040118444	A1	20040624	US 2002-248140	20021220
			<	
PRIORITY APPLN. INFO.:			US 2002-248140	20021220

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

AB An organic photovoltaic (PV) device comprises a plurality of organic PV cells connected in series to cover a large area. The organic PV device optionally has an elec. circuit element connected in parallel to each organic PV cell. The organic PV device allows for continued operation even when short circuits develop or elec. interruption occurs in one of the cells. The devices

conveniently manufactured using a shadow mask, which allows for the formation of several consecutive layers in one apparatus

IT 148-24-3D, 8-Hydroxyquinoline, metal complex 7429-90-5, Aluminum, uses 7440-66-6, Zinc, uses

150477-54-6, Indium tin zinc oxide (method of fabrication of large-area solar photovoltaic devices)

RN 148-24-3 HCAPLUS

CN 8-Ouinolinol (CA INDEX NAME)



RN 7429-90-5 HCAPLUS

CN Aluminum (CA INDEX NAME)

8.1

RN 7440-66-6 HCAPLUS

CN Zinc (CA INDEX NAME)

Zn

RN 150477-54-6 HCAPLUS

CN Indium tin zinc oxide (CA INDEX NAME)

Component	: 1	Ratio	- 1	Component
	1		1	Registry Number
	+		+	
0	1	x	1	17778-80-2
In	1	x	- 1	7440-74-6
Zn	1	x	- 1	7440-66-6
Sn	1	х	1	7440-31-5

IC ICM H01L031-00

INCL 136244000; 136263000; 438080000; 438082000

CC 52-2 (Electrochemical, Radiational, and Thermal Energy Technology)

Section cross-reference(s): 76

IT Vapor deposition process

(chemical; method of fabrication of large-area solar photovoltaic devices)

IT Cyanine dyes

Diodes

Electrodeposition

Electron beam evaporation

Electron transport

Hole transport Resistors Semiconductor materials Solar cells Sputtering Varistors

(method of fabrication of large-area solar photovoltaic devices)

IT Vapor deposition process

(phys.; method of fabrication of large-area solar photovoltaic devices)

IT Coating process

(vacuum; method of fabrication of large-area solar photovoltaic devices)

81-33-4 86-74-8D, Carbazole, derivs. 91-19-0D, Quinoxaline, derivs. 91-22-5D, Quinoline, derivs. 110-86-1D, Pyridine, derivs. 120-12-7D, Anthracene, derivs. 148-24-3D, 8-Hydroxyquinoline, metal complex 198-55-0D, Perylene, derivs. 288-32-4D, Imidazole, derivs. 289-95-2D, Pyrimidine, derivs. 494-72-4D, Diphenoquinone, derivs. 519-73-3, Triphenvlmethane 578-95-0, Acridone 588-59-0D, Stilbene, derivs. 603-34-9, Triphenylamine 1327-33-9, Antimony oxide 1332-29-2, Tin oxide 7429-90-5, Aluminum, uses 7439-91-0, Lanthanum, uses 7439-93-2, Lithium, uses 7439-95-4, Magnesium, uses 7440-02-0, Nickel, uses 7440-06-4, Platinum, uses 7440-09-7, Potassium, uses 7440-19-9, Samarium, uses 7440-22-4, Silver, uses 7440-23-5, Sodium, uses 7440-24-6, Strontium, uses 7440-31-5, Tin, uses 7440-39-3, Barium, uses 7440-45-1, Cerium, uses 7440-48-4, Cobalt, uses 7440-53-1, Europium, uses 7440-57-5, Gold, uses 7440-66-6, Zinc, uses 7440-67-7, Zirconium, uses 7440-70-2, Calcium, uses 7440-74-6, Indium, uses 9033-83-4, Polyphenylene 11120-54-0D, Oxadiazole, derivs. 12654-97-6, Triazine 25233-30-1, Polyaniline 25233-34-5, Polythiophene 30604-81-0, Polypyrrole 36118-45-3, Pyrazoline 37306-44-8D, Triazole, derivs. 50926-11-9, Ito 66280-99-7, Poly(thienylene vinylene) 91201-85-3, PolyIsothianaphthene 96638-49-2, Poly(phenylene vinylene) 96638-49-2D, Polyphenylene vinylene, CNand CF3-substituted 99685-96-8, Buckminsterfullerene

(method of fabrication of large-area solar photovoltaic devices)

L68 ANSWER 9 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN ACCESSION NUMBER: 2003:1007243 HCAPLUS Full-text

DOCUMENT NUMBER: 140:51531

TITLE: Method for the roll-to-roll deposition of an optically transparent and high conductivity

metallic thin film

150477-54-6. Indium tin zinc oxide

INVENTOR(S): He, Xiao-Ming; Heydarpour, Ramin
PATENT ASSIGNEE(S): Avery Dennison Corporation, USA

SOURCE: PCT Int. Appl., 67 pp.

CODEN: PIXXD2
DOCUMENT TYPE: Patent

LANGUAGE: English

FAMILY ACC. NUM. COUNT: 2

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
WO 2003107079	A2	20031224	WO 2003-US18755	20030612
			<	
WO 2003107079	A9	20040304		

```
WO 2003107079
                         А3
                               20040701
        W: AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BY, BZ, CA, CH,
            CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, ES, FI, GB, GD,
            GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ,
            LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ,
            NO, NZ, OM, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, TJ,
            TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW
        RW: GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW, AM, AZ,
            BY, KG, KZ, MD, RU, TJ, TM, AT, BE, BG, CH, CY, CZ, DE, DK,
            EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PT, RO, SE,
            SI, SK, TR, BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR,
            NE, SN, TD, TG
    US 20040001915
                         A1
                               20040101
                                          US 2002-172282
                                                                  20020614
                                                  <--
    US 6811815
                               20041102
                         B2
                                          AU 2003-259035
    AU 2003259035
                         A1
                               20031231
                                                                  20030612
                                                  <--
    EP 1534510
                         A2
                               20050601
                                          EP 2003-760348
                                                                  20030612
                                                  <--
        R: AT, BE, CH, DE, DK, ES, FR, GB, GR, IT, LI, LU, NL, SE, MC,
            PT, IE, SI, LT, LV, FI, RO, MK, CY, AL, TR, BG, CZ, EE, HU, SK
PRIORITY APPLN. INFO.:
                                           US 2002-172282
                                                             A 20020614
                                                  <--
                                           WO 2003-US18755
                                                             W 20030612
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ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 26 Dec 2003

AB The invention relates to a method for the roll-to-roll deposition of an optically transparent and high conductivity metallic thin film, allowing the film to be collected in a continuous roll. The method consists of the steps of (i) providing a flexible plastic substrate; (ii) depositing a multilayered conductive metallic film on the flexible plastic substrate by a thin deposition technique to form a composite film; and (iii) collecting the composite film in continuous rolls.

<--

IT 148-24-3D, 8-Hydroxyquinoline, metal complexes

2085-33-8D, Alq3, derivs.

(luminescent material; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

RN 148-24-3 HCAPLUS

CN 8-Quinolinol (CA INDEX NAME)



- RN 2085-33-8 HCAPLUS
- CN Aluminum, tris(8-quinolinolato-KN1, KO8)- (CA INDEX NAME)



IC ICM G02F

C 76-2 (Electric Phenomena)

Section cross-reference(s): 38, 56, 57, 73, 78

 ${\tt ST}-{\tt roll}$  deposition optically transparent conductive metallic thin  ${\tt film}$ 

IT Ketones, uses

(1,3-diketones, metal complexes, luminescent material; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT Polyesters, uses

(Arylite, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT Polvesters, uses

(ST 504, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT Polvesters, uses

(aromatic, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT Vapor deposition process

(chemical; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT Schiff bases

(complexes, luminescent material; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT Rolls

(composite film collected on; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT Metals, uses

(conductive films; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT Polvolefins

(cycloalkene polymer-, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT Films

(elec. conductive; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT Electric conductors

(films; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

T Coating process

(flexible substrate reinforced by; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

10/594.762 Glass substrates (flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film) Epoxy resins, uses Fluoropolymers, uses Phenolic resins, uses Polycarbonates, uses Polvimides, uses Polyolefins Polysulfones, uses Polyurethanes, uses (flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film) Vapor deposition process (ion plating; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film) ΤТ Polvacetylenes, uses (ladder, luminescent material; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film Charge transfer complexes Organometallic compounds Poly(arylenealkenylenes) Polyanilines Polyphenyls Rare earth complexes (luminescent material; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film) Composites Laser ablation Luminescent substances Magnetron sputtering (method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film) Polyalkenamers (method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film) Ladder polymers (polyacetylenes, luminescent material; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film) Polyethers, uses (polyamide-, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film Polyethers, uses (polyester-, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film Polvamides, uses

Polyesters, uses
Polysulfones, uses

(polyether-, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film )

IT Cycloalkenes

(polymers, polyolefin-, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

Polyethers, uses

(polysulfone-, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT Gold alloy, nonbase

Silver alloy, nonbase

(method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT 24968-11-4, Polyethylene naphthalate

(Kaladex S 1020/500, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT 25038-59-9, ST 504, uses

(ST 504, flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

17 7440-21-3, Silicon, uses 9002-84-0, Polytetrafluoroethylene 9004-35-7, Cellulose acetate 9011-14-7, Polymethylmethacrylate 24937-79-9, Polyvinylidene fluoride 25014-41-9, Polyacrylonitrile 25230-87-9 25667-42-9, Polythersulfone 150872-17-6, Arton 637005-62-0, Arton G 7810

(flexible substrate; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT 91-22-5D, Quinoline, metal complexes 123-94-6D, Acetylacetone, metal complexes 148-24-3D, 8-Hydroxyquinoline, metal complexes 2085-33-8D, Alq3, derivs. 7440-31-5D, Tin, tin(IV) complexes 9033-83-4, Poly(phenylene) 17056-99-4D, 5-Hydroxyquinoxaline, metal complexes 25038-69-1, Poly(phenylacetylene) 25067-59-8,

Poly(N-vinylcarbazole) 25233-30-1, Poly(aniline) 25233-34-5, Poly(thiophene) 25233-34-5D, Poly(thiophene), 3-alkyl derivs. 26009-24-5D, Poly(p-phenylenevinylene) 26009-24-5D,

Poly(p-phenylenevinylene), dialkoxy derivs. 41999-83-1D,

Maleonitriledithiol, metal complexes 95270-88-5, Poly(fluorene) 104934-51-2, Poly(3-octylthiophene) (luminescent material; method for roll-to-roll deposition of

optically transparent and high conductivity metallic thin film)
IT 7440-22-4, Silver, uses 7440-57-5, Gold, uses 25038-78-2,
Dicyclopentadiene homopolymer 174351-38-3, Cerium indium oxide
246032-84-8, Copper 0.5, gold 1, silver 98.5 (atomic)

(method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film)

IT 7440-37-1, Argon, processes 7782-44-7, Oxygen, processes

(sputtering process gas; method for roll-to-roll deposition of optically transparent and high conductivity metallic thin film REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

7727-37-9, Nitrogen, processes

L68 ANSWER 10 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 2003:898222 HCAPLUS Full-text
DOCUMENT NUMBER: 140:278163

TITLE: Organic electroluminescent material and its

application

INVENTOR(S): Qiu, Yong; Qiao, Juan
PATENT ASSIGNEE(S): Qinghua University, Peop. Rep. China

SOURCE: Faming Zhuanli Shenging Gongkai Shuomingshu, 26

pp. CODEN: CNXXEV

DOCUMENT TYPE: Patent LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 2

### PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
CN 1388205	Α	20030101	CN 2002-121289		20020613
CN 1250674	C	20060412			
US 20040001970	A1	20040101	US 2003-352493		20030128
			<		
US 7232616	B2	20070619			
JP 2004162002	A	20040610	JP 2003-168569		20030613
			<		
JP 3689815	B2	20050831			
PRIORITY APPLN. INFO.:			CN 2002-121289 <	A	20020613
			CN 2002-145923	A	20021023

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT OTHER SOURCE(S): MARPAT 140:278163

ED Entered STN: 18 Nov 2003

AB The organic electroluminescent material is a Schiff base containing tridentate complex, (L2L3M)n (L2 = bidentate ligand; L3 = schiff base-type tridentate ligand; M = metal ion such as Al, Ga, or In; and n = 1 or 2). The L3 is HOXCH: NYOH (X and/or Y = Ph, naphthyl, phenanthryl, pyridyl, thiazolyl, carbazolvi, or their derivs, substituted by alkvi, alkoxy, NO2, CN, NH2, halo, aromatic group, thienyl, pyrrolyl, or pyridyl). The L2 is HOZN [Z = 8hydroxyquinoline, 4-hydroxy- 1,5-naphthyridine, 5-hydroxyquinoxaline, 2-(2hydroxyphenyl) benzoxazole, 2-(2-hydroxyphenyl) benzimidazole, 2-(2hydroxyphenyl)benzothiazole, 10-hydroxybenzo[h]quinoline, pyridine-2carboxvlic acid, or their derivs. substituted by alkvl, alkoxv, NO2, CN, NH2, halo, aromatic group, thienyl, pyrrolyl, or pyridyl]. The organic electroluminescent material is prepared by condensing salicylaldehyde or derivative with 2-aminophenol or its derivative to obtain Schiff base, complexing with M3+ salt and another ligand, and purifying via sublimation. The organic electroluminescent material may be used as electron transmission layer or luminescent layer of organic electroluminescent device with multilayer or monolayer structure, doped dye, or dye, preferably used in preparing red organic electroluminescent device. The electroluminescent devices were manufactured on ITO-modified glass sheet by vacuum vapor deposition.

# IT 502844-08-8P

(crystal structure of; organic electroluminescent material for electroluminescent device)

- RN 502844-08-8 HCAPLUS
- CN Gallium, bis[μ-[2-[[[2-(hydroxy-κ0:κ0)phenyl]iminoκN]methyl]phenolato(2-)-κ0]]bis(8-quinolinolatoκN1,κ08)di-, stereoisomer (9CI) (CA INDEX NAME)

II 326850-13-9P 656823-73-3P 656822-77-TP 656823-85-TP 656823-86-6P 656923-94-8P 656923-94-8P 656924-04-3P 656924-10-1P 656924-10-3P 656924-10-3P 656924-10-3P 674769-00-PP 674769-01-8P 674769-03-0P (organic electroluminescent material for electroluminescent device) 326850-13-9 HCAPUS

CN Aluminum, [2-(2-benzoxazoly1-κN3)phenolato-κΟ][2-[[[2-(hydroxy-κΟ)phenyl]imino-κN]methyl]phenolato(2-)-κΟ]-(9CI) (CA INDEX NAME)

RN 656823-73-3 HCAPLUS

CN Gallium, [1-[[[2-(hydroxy-KO)phenyl]imino-KN]methyl]-2naphthalenolato(2-)-KO](8-quinolinolato-KN1,KO8)-(CA INDEX NAME)

RN 656823-77-7 HCAPLUS

CN Gallium, (5-fluoro-8-quinolinolato-kN1, kO8) [2-[[[2-(hydroxy-kO)phenyl]imino-kN]methyl]phenolato(2-)-kO]-(9c1) (CA INDEX NAME)

RN 656823-83-5 HCAPLUS

CN Gallium, [2-[[[2-(hydroxy-k0)phenyl]iminokN]methyl]phenolato(2-)-k0](1,5-naphthyridin-4-olatokN5,k04)- (9CI) (CA INDEX NAME)

RN 656823-85-7 HCAPLUS

CN Gallium, [2-[[[2-(hydroxy-κ0)phenyl]iminoκN]methyl]phenolato(2-)-κ0](5-quinoxalinolatoκN4,κ05)- (9CI) (CA INDEX NAME)

RN 656823-86-8 HCAPLUS

CN Gallium, [1-[[[2-(hydroxy-KO)phenyl]imino-KN]methyl]-2naphthalenolato(2-)-KO](5-quinoxalinolato-KN4,KO5)(CA INDEX NAME)

RN 656823-94-8 HCAPLUS

CN Gallium, [2-[[[2-(hydroxy-KO)phenyl]imino-KN]methyl]phenolato(2-)-KO][2-(1-methyl-1H-benzimidazol-2yl-KN3)phenolato-KO]- (9CI) (CA INDEX NAME)

RN 656824-04-3 HCAPLUS

CN Gallium, [2-(2-benzothiazoly1-kN3)phenolato-kO][2-[[[2-(hydroxy-kO)phenyl]imino-kN]methyl]phenolato(2-)-kO]-(9CI) (CA INDEX NAME)

RN 656824-10-1 HCAPLUS

CN Gallium, (benzo[h]quinolin-10-olato-kN1, kO10)[2-[[[2-(hydroxy-kO)phenyl]imino-kN]methyl]phenolato(2-)-kO]-(9C1) (CA INDEX NAME)

RN 656824-12-3 HCAPLUS

CN Gallium, [2-[[[2-(hydroxy-κ0)phenyl]iminoκN]methyl]phenolato(2-)-κ0](2-pyridinecarboxylatoκN1,κ02)- (9CI) (CA INDEX NAME)

RN 674768-96-8 HCAPLUS

CN Aluminum, [2-[[[2-(hydroxy-KO)phenyl]imino-KN]methyl]phenolato(2-)-KO](1,5-naphthyridin-4-olato-KN5,KO4)- (9CI) (CA INDEX NAME)

- RN 674768-98-0 HCAPLUS
- CN Aluminum, [2-[[[2-(hydroxy-κ0)phenyl]iminoκN]methyl]phenolato(2-)-κ0](5-quinoxalinolatoκN4,κ05)- (9CI) (CA INDEX NAME)

- RN 674769-00-7 HCAPLUS
- CN Aluminum, [2-(1H-benzimidazol-2-yl-κN3)phenolato-κ0][2-[[[2-(hydroxy-κ0)phenyl]imino-κN]methyl]phenolato(2-)κ0]- (9CI) (CA INDEX NAME)

- RN 674769-01-8 HCAPLUS
- CN Aluminum, [2-(2-benzothiazoly1-kN3)phenolato-k0][2-[[[2-(hydroxy-k0)pheny1]mino-kN]methy1]phenolato(2-)-k0]-(9C1) (CA INDEX NAME)

RN 674769-03-0 HCAPLUS

CN Aluminum, [2-[[[2-(hydroxy-KO)phenyl]imino-KN]methyl]phenolato(2-)-KO](2-pyridinecarboxylato-KN1,KO2)- (9CI) (CA INDEX NAME)

IT 148-24-3, 8-Hydroxyquinoline, reactions 7446-70-0 , Aluminum chloride, reactions 13450-90-3, Gallium trichloride

(preparation of organic electroluminescent material)

RN 148-24-3 HCAPLUS

CN 8-Quinolinol (CA INDEX NAME)

RN 7446-70-0 HCAPLUS

CN Aluminum chloride (AlC13) (CA INDEX NAME)

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RN 13450-90-3 HCAPLUS
CN Gallium chloride (GaCl3) (CA INDEX NAME)
    ICM C09K011-06
CC
    73-5 (Optical, Electron, and Mass Spectroscopy and Other Related
    Properties)
    Section cross-reference(s): 74, 75
    502844-08-8P
        (crystal structure of; organic electroluminescent material for
       electroluminescent device)
    326850-13-9P 656823-73-3P 656823-77-7P
    656823-83-5P 656823-85-7P 656823-86-8P
    656823-94-8P 656824-04-3P 656824-10-1P
    656824-12-3P 674768-95-7P 674768-96-8P
    674768-97-9P 674768-98-0P 674768-99-1P
    674769-00-7P 674769-01-8P 674769-02-9P
    674769-03-0P
        (organic electroluminescent material for electroluminescent device)
    90-02-8, Salicylaldehyde, reactions 95-55-6, 2-Aminophenol
    98-98-6, Pyridine-2-carboxylic acid 148-24-3,
    8-Hydroxyquinoline, reactions 387-97-3, 5-Fluoro-8-hydroxyquinoline
    708-06-5, 2-Hydroxy-1-naphthaldehyde 835-64-3,
    2-(2-Hydroxyphenyl)benzoxazole 2963-66-8,
    2-(2-Hydroxyphenyl)benzimidazole 3411-95-8,
    2-(2-Hydroxyphenyl)benzothiazole 5423-54-1,
    4-Hydroxy-1,5-naphthyridine 7446-70-0, Aluminum chloride,
               10025-82-8, Indium chloride 13450-90-3,
    reactions
    Gallium trichloride
                         17056-99-4, 5-Hydroxyquinoxaline 33155-90-7,
    10-Hydroxybenzo[h]quinoline
        (preparation of organic electroluminescent material)
OS.CITING REF COUNT:
                       1
                             THERE ARE 1 CAPLUS RECORDS THAT CITE THIS
                              RECORD (1 CITINGS)
L68 ANSWER 11 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
                        2003:433000 HCAPLUS Full-text
ACCESSION NUMBER:
DOCUMENT NUMBER:
                        139:14916
TITLE:
                        Electrophotographic photoreceptors with
                        charge-stopping layers containing metal
                        complexes and their manufacture
INVENTOR(S):
                        Fukumoto, Koichi; Aragae, Ryuichi; Ono, Masayuki
PATENT ASSIGNEE(S):
                        Matsushita Electric Industrial Co., Ltd., Japan
SOURCE:
                        Jpn. Kokai Tokkyo Koho, 13 pp.
                        CODEN: JKXXAF
DOCUMENT TYPE:
                        Patent.
LANGUAGE:
                        Japanese
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
```

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 2003162079	A	20030606	JP 2001-358780	20011126
			<	

PRIORITY APPLN. INFO.: JP 2001-358780 20011126

OTHER SOURCE(S): MARPAT 139:14916

ED Entered STN: 06 Jun 2003 GI

- AB The photoreceptor comprises a conductive support, a charge-stopping layer containing metal complex I, II, or III (M = metal ion; n = 0, 1, 2, 3), a charge-generating layer, and a charge-transfer layer. Specific compds. suitable as ligand for the complexes are also given. Manufacture of the photoreceptor includes vacuum vapor deposition of the complex. Clear electrophotog, images free of fooging are obtained even after repeated use.
- electrophotog, images free of fogging are obtained even after repeated use II 148-24-3DP, 8-Hydroxyquinoline, metal complexes 58280-31-2P 116083-83-1P 164259-44-3P

(electrophotog. photoreceptors with metal complex charge-stopping layers formed by vacuum vapor deposition

- RN 148-24-3 HCAPLUS
- CN 8-Quinolinol (CA INDEX NAME)



- RN 58280-31-2 HCAPLUS
- CN Zinc, bis[2-(2-benzothiazoly1- $\kappa$ N3)phenolato- $\kappa$ O]-, (T-4)- (CA INDEX NAME)

- RN 116083-83-1 HCAPLUS
- CN Zinc, [[2,2'-(azo-κN)bis[phenolato-κO]](2-)]- (9CI) (CA INDEX NAME)

- RN 164259-44-3 HCAPLUS
- CN Zinc, bis(benzo[h]quinolin-10-olato-κN1,κO10)-, (T-4) (CA INDEX NAME)

- IT 2085-33-8, Tris(8-quinolinolato)aluminum 23467-27-8 41584-66-1 78970-14-6
  - (electrophotog, photoreceptors with metal complex charge-stopping layers formed by vacuum vapor deposition  ${\sf vapor}$
- RN 2085-33-8 HCAPLUS
- CN Aluminum, tris(8-quinolinolato-KN1, KO8)- (CA INDEX NAME)

- RN 23467-27-8 HCAPLUS
- CN Zinc, bis[2-(2-benzoxazolyl- $\kappa$ N3)phenolato- $\kappa$ O]-, (T-4)- (CA INDEX NAME)

- RN 41584-66-1 HCAPLUS
- CN Aluminum, tris(5-chloro-8-quinolinolato-κN1,κO8)- (CA INDEX NAME)

- RN 78970-14-6 HCAPLUS
- CN Aluminum, tris(5,7-dichloro-8-quinolinolato-κN1,κO8)- (CA INDEX NAME)

- IC ICM G03G005-14
- ICS G03G005-00; G03G005-06
- CC 74-3 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- ST electrophotog photoreceptor charge stopping layer metal complex
- IT Electrophotographic photoconductors (photoreceptors)
  (electrophotog, photoreceptors with metal complex charge-stopping layers formed by vacuum vapor deposition
- IT Chelates

(electrophotog. photoreceptors with metal complex charge-stopping layers formed by vacuum vapor deposition

IT Vapor deposition process

(vacuum; electrophotog. photoreceptors with metal complex charge-stopping layers formed by vacuum vapor deposition)

- IT 66-71-7DP, 1,10-Phenanthroline, metal complexes 148-24-3DP
  - , 8-Hydroxyquinoline, metal complexes 835-64-3DP, metal complexes 2050-14-8DP, metal complexes 3411-95-8DP, metal complexes
  - 17904-83-5P, Tris(dibenzoylmethanato)(1,10-phenanthroline)europium
  - 18130-95-5P, Tris(benzoylacetonato)(1,10-phenanthroline)europium
  - 33155-90-7DP, 10-Hydroxybenzo[h]quinoline, metal complexes
  - 33421-36-2DP, metal complexes 58280-31-2P
  - 116083-83-1P 164259-44-3P

(electrophotog, photoreceptors with metal complex charge-stopping layers formed by vacuum vapor deposition  $\,$ 

- IT 2085-33-8, Tris(8-quinolinolato)aluminum
  - 23467-27-8 41584-66-1 78970-14-6

(electrophotog. photoreceptors with metal complex charge-stopping layers formed by vacuum vapor deposition

L68 ANSWER 12 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: DOCUMENT NUMBER: 2001:644372 HCAPLUS Full-text 135:378318

TITLE .

Organic electroluminescent device fabricated with chemical vapor deposited

bis(8-hydroxy-5-quinoly1)-methane aluminum chelate polymer film

AUTHOR(S): Yu, J.; Chen, Z.; Miyata, S.

CORPORATE SOURCE: Tokyo University of Agriculture and Technology,

Graduate School of Bio-Applications and Systems Engineering (BASE), Tokyo, Koganei, 184-0012,

Japan

SOURCE: Synthetic Metals (2001), 123(2), 239-243

CODEN: SYMEDZ; ISSN: 0379-6779

PUBLISHER: Elsevier Science S.A.

DOCUMENT TYPE: Journal LANGUAGE: English

ED Entered STN: 04 Sep 2001

AB In this paper CVD method is presented for the preparation of chelate polymer film as constituent for organic electroluminescent (EL) devices. The chelate polymer film, poly(bis(8-hydroxy-5-quinoly))-methana Al), was thermally converted into by simultaneously coevapd. Al acetylacetonate and bis(8-hydroxy-5-quinoly))-methane in the gas phase in the CVD process. Two kinds of EL devices using the chelate polymer as the emitting material were fabricated,

IT 2536-71-2 13963-57-0, Aluminum acetylacetonate

(organic electroluminescent device fabricated with chemical vapor deposited bis(8-hydroxy-5-quinolyl)-methane aluminum chelate polymer film)

and their EL properties were characterized and discussed.

RN 2536-71-2 HCAPLUS

CN 8-Quinolinol, 5,5'-methylenebis- (CA INDEX NAME)

RN 13963-57-0 HCAPLUS

CN Aluminum, tris(2,4-pentanedionato- $\kappa$ O2, $\kappa$ O4)-, (OC-6-11)- (CA INDEX NAME)

$$\begin{array}{c} \text{Me} \\ \text{$\bar{\text{H}}$} \\ \text{$\bar{\text{H}}$} \\ \end{array} \begin{array}{c} \text{Me} \\ \text{$\bar{\text{H}}$} \\ \end{array} \begin{array}{c} \text{Me} \\ \text{3.5 Me} \\ \text{Me} \\ \end{array} \begin{array}{c} \text{Me} \\ \text{Me} \\ \end{array}$$

### IT 374067-48-8

(polymeric; organic electroluminescent device fabricated with chemical vapor deposited bis(8-hydroxy-5-quinoly1)-methane aluminum chelate polymer

film) RN 374067-48-8 HCAPLUS

CN Aluminum, tris[5-[(8-hydroxy-5-quinoliny1)methy1]-8-quinolinolato-KN1,KO8]- (CA INDEX NAME)

PAGE 1-A

PAGE 2-A

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

IT Vapor deposition process

(chemical; organic electroluminescent device fabricated with  ${\tt chem}$  . vapor deposited

bis(8-hydroxy-5-quinoly1)-methane aluminum chelate polymer film)

IT Electroluminescent devices

IR spectra

Luminescence

(organic electroluminescent device fabricated with chemical vapor deposited bis(8-hydroxy-5-quinoly1)-methane

aluminum chelate polymer film)

25067-59-8, PVK

(organic electroluminescent device fabricated with chemical vapor deposited bis(8-hydroxy-5-quinoly1)-methane aluminum chelate polymer film)

2536-71-2 13963-57-0, Aluminum acetylacetonate (organic electroluminescent device fabricated with chemical vapor deposited bis(8-hydroxy-5-quinoly1)-methane aluminum chelate polymer film)

374067-48-8 ΙT

(polymeric; organic electroluminescent device fabricated with chemical vapor deposited

bis(8-hydroxy-5-quinoly1)-methane aluminum chelate polymer film)

OS.CITING REF COUNT: 5 THERE ARE 5 CAPLUS RECORDS THAT CITE THIS RECORD (5 CITINGS)

REFERENCE COUNT: 18 THERE ARE 18 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE

RE FORMAT

L68 ANSWER 13 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN ACCESSION NUMBER: 2001:582229 HCAPLUS Full-text

DOCUMENT NUMBER: 135:160002

TITLE: Organic electroluminescent device and its

manufacturing method

INVENTOR(S): Sato, Yoshiharu; Tanamura, Mitsuru Mitsubishi Chemical Corp., Japan PATENT ASSIGNEE(S):

SOURCE: PCT Int. Appl., 46 pp.

CODEN: PIXXD2 DOCUMENT TYPE: Patent

LANGUAGE: Japanese FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

	TENT						DATE									ATE	
	2001						2001	0809			001-					0010	201
		GM, LS, PT, UG,	CR, HR, LT, RO, US,	CU, HU, LU, RU, UZ,	CZ, ID, LV, SD, VN,	DE, IL, MA, SE, YU,	DK, IN, MD, SG, ZA,	DM, IS, MG, SI, ZW	DZ, KE, MK, SK,	EE, KG, MN, SL,	BG, ES, KP, MW, TJ,	BR, FI, KR, MX, TM,	GB, KZ, MZ, TR,	GD, LC, NO, TT,	GE, LK, NZ, TZ,	GH, LR, PL, UA,	
	RW:		DE,	DK,	ES,	FI,	FR,	GB,	GR,	ΙE,	IT,	LU,	MC,	NL,	PT,		TG
JP	2001	3323	90		A		2001	1130		JP 2	001-	1879	2		2	0010	126
											<						
	3972 1173				B2 A1					EP 2		9027	28		2	0010	201
	R:	AT,							GB,	GR,	IT,	LI,	LU,	NL,	SE,	MC,	
US	2002				LT, A1				1	US 2		9685	00		2	0011	002
US PRIORIT	6534				B2		2003	0318		TD 2	000	2551	С			0000	202
PRIORII	I APP	LIN.	INFO	. :						JP Z		 5331	5		4 2	0000	202
										JP 2	000-	7662	0	Z	A 2	0000	317

WO 2001-JP719 W 20010201 <--

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 10 Aug 2001

- AB An organic electroluminescent device comprises a luminescence layer interposed between a pos. electrode and a neg. electrode on a substrate. The neg. electrode comprises metal material, alkaline metal, and C and O atoms. The neq. electrode is formed by vapor phase deposition using a metal material and an organic compound containing an alkaline metal. The organic electroluminescent device is heat-resistant and weather-resistant, and it operates on low voltage and emits high-luminance light while maintaining stable luminescence characteristics. The organic electroluminescent element has a wide range of manufacturing process conditions.
- IT 2085-33-8, Al 8g 37220-89-6D, Aluminum lithium oxide, carbon doped 157077-25-3

(organic electroluminescent device)

RN 2085-33-8 HCAPLUS

CN Aluminum, tris(8-quinolinolato-KN1,KO8)- (CA INDEX NAME)



- RN 37220-89-6 HCAPLUS
- CN Aluminum lithium oxide (CA INDEX NAME)

Component	1	Ratio	l l Re	Component gistry Number
	+		+	
0	1	x	1	17778-80-2
Li	- 1	x	1	7439-93-2
Al	1	x	1	7429-90-5

- RN 157077-25-3 HCAPLUS
- Aluminum, bis(2-methyl-8-quinolinolato-CN

KN1, KO8) (triphenvlsilanolato) - (CA INDEX NAME)

```
ΙT
    7429-90-5, Aluminum, uses 25387-93-3
       (organic electroluminescent device)
RN
    7429-90-5 HCAPLUS
    Aluminum (CA INDEX NAME)
CN
RN 25387-93-3 HCAPLUS
CN 8-Quinolinol, lithium salt (1:1) (CA INDEX NAME)
IC
  H05B033-26; H05B033-10; H05B033-14
CC
    73-11 (Optical, Electron, and Mass Spectroscopy and Other Related
    Properties)
    Section cross-reference(s): 74
    Vapor deposition process
IT
       (manufacture of organic electroluminescent device)
IΤ
    147-14-8, Copper phthalocyanine 2085-33-8, Al 8q
    37220-89-6D, Aluminum lithium oxide, carbon doped
    50926-11-9, ITO 58328-31-7 94928-86-6 123847-85-8,
    4,4'-Bis[N-[1-naphthyl]-N-phenylamino]biphenyl 157077-25-3
       (organic electroluminescent device)
ΤТ
    1313-59-3, Sodium oxide, uses 7429-90-5, Aluminum, uses
    12057-24-8, Lithium oxide, uses 25387-93-3 26134-62-3,
    Lithium nitride 160883-74-9 352521-14-3
        (organic electroluminescent device)
OS.CITING REF COUNT:
                       7
                              THERE ARE 7 CAPLUS RECORDS THAT CITE THIS
                              RECORD (7 CITINGS)
REFERENCE COUNT:
                        14
                              THERE ARE 14 CITED REFERENCES AVAILABLE FOR
                              THIS RECORD, ALL CITATIONS AVAILABLE IN THE
                              RE FORMAT
L68 ANSWER 14 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER:
                        2001:185142 HCAPLUS Full-text
DOCUMENT NUMBER:
                        134:246046
TITLE:
                        Efficient electron-injection for organic
                        electroluminescent devices
INVENTOR(S):
                        Madathil, Joseph K.; Mason, Max Garrett; Tang,
                        Ching Wan
PATENT ASSIGNEE(S):
                       Eastman Kodak Company, USA
SOURCE:
                        Eur. Pat. Appl., 12 pp.
```

CODEN: EPXXDW

DOCUMENT TYPE: Patent LANGUAGE: English

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
EP 1083612	A2	20010314	EP 2000-202921	20000821
EP 1083612 R: AT, BE, CH,	A3 DE, DK	20040102 , ES, FR, GB	, GR, IT, LI, LU, NL	SE, MC,
PT, IE, SI, US 6278236	LT, LV B1	, FI, RO 20010821	US 1999-387402	19990902
JP 2001085165	A	20010330	< JP 2000-267679	20000904
PRIORITY APPLN. INFO.:			< US 1999-387402	A 19990902

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT ED Entered STN: 16 Mar 2001

AB An organic electroluminescent (EL) device having a layered structure, including an anode; an organic hole-transport layer in contact with the anode; an organic emitting layer having 1 surface thereof in contact with the hole-transport layer; an organic electron-transport layer in contact with a second surface of the emitting layer, an electron-injecting layer in contact with the electron-transport layer; and a cathode in contact with the electron-injecting layer, in which the electron-injecting layer includes Al and 21 alkali halide or 21 alkaline earth halide.

IT 7429-90-5, Aluminum, processes

(electron-injection layer; efficient electron-injection

layers for organic electroluminescent devices)

RN 7429-90-5 HCAPLUS

CN Aluminum (CA INDEX NAME)

A1

- IT 148-24-3, 8-Quinolinol, processes (emitting layer; efficient electron-injection layers for organic electrolluminescent devices)
- RN 148-24-3 HCAPLUS
- CN 8-Ouinolinol (CA INDEX NAME)



IT 37275-76-6, Aluminum Zinc oxide 117944-65-7, Indium Zinc oxide

(light transmissive anode; efficient electron-injection

lavers for organic electroluminescent devices)

- RN 37275-76-6 HCAPLUS
- Aluminum zinc oxide (CA INDEX NAME) CN

Component	- 1	Ratio	- 1	Component		
	- 1		- 1	Registry Number		
	==+==		===+=			
0	- 1	x	- 1	17778-80-2		
Zn	- 1	x	- 1	7440-66-6		
Al	- 1	x	- 1	7429-90-5		

- 117944-65-7 HCAPLUS RN
- Indium zinc oxide (CA INDEX NAME)

Component	1	Ratio	 	Component Registry Number
	=+===		====+=:	
0	1	x	1	17778-80-2
In	1	×	1	7440-74-6
Zn	1	×	1	7440-66-6

- ICM H01L051-20
- CC 76-3 (Electric Phenomena)
  - Section cross-reference(s): 74, 75
- ΙT Electron transport
  - Electron-hole recombination
    - Hole transport
    - (efficient electron-injection layers for organic electroluminescent devices)
- Transparent films
  - (elec. conductive, anode; efficient electron-injection
  - layers for organic electroluminescent devices) Alkali metal fluorides
- Alkaline earth fluorides
  - - (electron-injection layer; efficient electron-injection layers for organic electroluminescent devices)
- Conduction electrons
  - (electron-injection; efficient electron-injection layers for organic electroluminescent devices)
- Electric conductors
  - (films, transparent, anode; efficient electron-injection layers for organic electroluminescent devices)
- Electroluminescent devices
  - (organic; efficient electron-injection layers for organic electroluminescent devices)
- Glass, uses
  - Plastics, uses
    - - (substrate; efficient electron-injection layers for organic electroluminescent devices)
- Vapor deposition process
  - (vacuum; efficient electron-injection layers for organic electroluminescent devices)
- 7429-90-5, Aluminum, processes
  - (electron-injection layer; efficient electron-injection layers for organic electroluminescent devices)
- 7681-49-4, Sodium fluoride, processes 7783-40-6, Magnesium fluoride
  - 7783-48-4, Strontium fluoride 7787-32-8, Barium fluoride
  - 7789-23-3, Potassium fluoride 7789-24-4, Lithium fluoride, processes 7789-75-5, Calcium fluoride, processes 13400-13-0, Cesium fluoride
  - 13446-74-7, Rubidium fluoride

(electron-injection layers; efficient electron-injection

layers for organic electroluminescent devices)

IT 148-24-3, 8-Quinolinol, processes

(emitting layer; efficient electron-injection layers for organic electroluminescent devices)

IT 1332-29-2, Tin oxide 12640-79-8, Nickel tungsten oxide 37275-76-6, Aluminum Zinc oxide 50926-11-9, Indium-tin-oxide 56997-34-3, Cadmium tin oxide 117944-65-7, Indium Zinc

ide 158346-28-2, Indium Magnesium oxide

(light transmissive anode; efficient electron-injection layers for organic electroluminescent devices)

IT 14808-60-7, Ouartz, uses

(substrate; efficient electron-injection layers for organic

electroluminescent devices)

OS.CITING REF COUNT: 6 THERE ARE 6 CAPLUS RECORDS THAT CITE THIS

RECORD (6 CITINGS)
REFERENCE COUNT: 1 THERE ARE 1 CITED REFERENCES AVAILABLE FOR

THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

L68 ANSWER 15 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN ACCESSION NUMBER: 2001:162141 HCAPLUS Full-text

DOCUMENT NUMBER: 134:185709

TITLE: Organic electroluminescent materials

INVENTOR(S): Qiu, Yong; Shao, Yan

PATENT ASSIGNEE(S): Qinghua Univ., Peop. Rep. China

SOURCE: Faming Zhuanli Shenqing Gongkai Shuomingshu, 18

pp. CODEN: CNXXEV

DOCUMENT TYPE: Patent

LANGUAGE: Chinese

FAMILY ACC. NUM. COUNT: 1 PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
CN 1258710	A	20000705	CN 2000-100040	20000107
			<	
CN 1139649	C	20040225		
US 20010037024	A1	20011101	US 2001-755688	20010105
			<	
US 6410766	B1	20020625		
PRIORITY APPLN. INFO.:			CN 2000-100040 A	20000107

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT

ED Entered STN: 08 Mar 2001

GI



AB The electroluminescent materials compose of Al complexes having organic ligands such as 8-hydroxyquinoline and Schiff base from salicylaldehyde and omminophenol, i.e., I, and/or their fused naphtho derivs. and analogs. The electroluminescent material is synthesized by condensing salicylaldehyde with o-aminophenol or derive., recrystg. in organic solvent to obtain Schiff base as ligand, and complexing with Al compound and 8-hydroxyquinoline or 2-phenol in the presence of a base. The electroluminescent element containing I was manufactured by chemical vapor deposition and vacuum electroplating method and it showed superior brightness.

IT 303981-53-5P 326850-12-8P 326850-13-9P 326850-14-0P 326850-15-1P 326850-16-2P 326850-17-3P 326850-18-4P 326850-19-5P

326850-20-8P 326850-21-9P

(preparation of quinolinolatoaluminum complexes as organic electroluminescent materials)

RN 303981-53-5 HCAPLUS

CN Aluminum, [2-[[[2-(hydroxy-κ0)phenyl]iminoκN]methyl]phenolato(2-)-κ0](8-quinolinolatoκN1,κ08)- (9CI) (CA INDEX NAME)

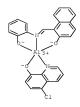


- RN 326850-12-8 HCAPLUS
- CN Aluminum, (5-chloro-8-quinolinolato-κN1,κ08)[2-[[[2-(hydroxy-κ0)phenyl]lmino-κN]methyl]phenolato(2-)-κ0]-(9CI) (CA INDEX NAME)

- RN 326850-13-9 HCAPLUS
- CN Aluminum, [2-(2-benzoxazolyl-κN3)phenolato-κO][2-[[[2-(hydroxy-κO)phenyl]imino-κN]methyl]phenolato(2-)-κO]-(9CI) (CA INDEX NAME)

- RN 326850-14-0 HCAPLUS
- CN Aluminum, [1-[[[2-(hydroxy-κ0)phenyl]imino-κN]methyl]-2-naphthalenolato(2-)-κ0](8-quinolinolato-κN1,κ08)-(CA INDEX NAME)

- RN 326850-15-1 HCAPLUS
- CN Aluminum, (5-chloro-8-quinolinolato-kNl, kO8)[1-[[[2-(hydroxy-KO)phenyl]imino-kN]methyl]-2-naphthalenolato(2-)-KO]- (CA INDEX NAME)



- RN 326850-16-2 HCAPLUS
- CN Aluminum, [3-[[[2-(hydroxy-KO)phenyl]imino-KN]methyl]-2naphthalenolato(2-)-KO](8-quinolinolato-KN1, KO8)-(CA INDEX NAME)

- RN 326850-17-3 HCAPLUS
- CN Aluminum, [2-[[[2-(hydroxy-KO)phenyl]imino-KN]methyl]-1naphthalenolato(2-)-KO](8-quinolinolato-KN1, KO8)-(CA INDEX NAME)

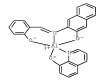
RN 326850-18-4 HCAPLUS

CN Aluminum, [1-[[[2-(hydroxy-κ0)phenyl]methylene]amino-κN]-2-naphthalenolato(2-)-κ0](8-quinolinolato-κN1,κ08)-(CA INDEX NAME)



- RN 326850-19-5 HCAPLUS
- CN Aluminum, (5-chloro-8-quinolinolato-κN1,κO8)[1-[[[2-(hydroxy-κO)phenyl]methylene]amino-κN]-2-naphthalenolato(2-)-κO1- (CA INDEX NAME)

- RN 326850-20-8 HCAPLUS
- CN Aluminum, [3-[[[2-(hydroxy-κ0)phenyl]methylene]amino-κN]-2naphthalenolato(2-)-κO](8-quinolinolato-κN1,κO8)-(CA INDEX NAME)



RN 326850-21-9 HCAPLUS

CN Aluminum, [2-[[[2-(hydroxy-κ0)phenyl]methylene]amino-κN]-1-naphthalenolato(2-)-κ0](8-quinolinolato-κN1,κ08)-(CA INDEX NAME)

IT 148-24-3, 8-Hydroxyquinoline, reactions 555-31-7

, Triisopropoxyaluminum 7446-70-0, Aluminum chloride, reactions

(preparation of quinolinolatoaluminum complexes as organic electroluminescent materials)

RN 148-24-3 HCAPLUS

CN 8-Ouinolinol (CA INDEX NAME)

RN 555-31-7 HCAPLUS

CN 2-Propanol, aluminum salt (3:1) (CA INDEX NAME)

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10/594.762
 нас-вн-сна
  ●1/3 Al
    7446-70-0 HCAPLUS
RN
CN
    Aluminum chloride (AlCl3) (CA INDEX NAME)
    C09K011-06
CC
    73-5 (Optical, Electron, and Mass Spectroscopy and Other Related
    Properties)
    Vapor deposition process
       (chemical; preparation of quinolinolatoaluminum complexes as organic
       electroluminescent materials)
    Electroluminescent devices
       (thin-film; preparation of quinolinolatoaluminum complexes as
       organic electroluminescent materials)
    303981-53-5P 326850-12-8P 326850-13-9P
    326850-14-0P 326850-15-1P 326850-16-2P
    326850-17-3P 326850-18-4P 326850-19-5P
    326850-20-8P
                  326850-21-99
        (preparation of quinolinolatoaluminum complexes as organic
       electroluminescent materials)
    90-02-8, Salicylaldehyde, reactions 95-55-6, 2-Aminophenol
    130-16-5, 5-Chloro-8-hydroxyquinoline 148-24-3,
    8-Hydroxyquinoline, reactions 555-31-7,
    Triisopropoxyaluminum 581-71-5,
    3-Hydroxy-2-naphthalenecarboxaldehyde
                                          708-06-5,
    2-Hydroxy-1-naphthalenecarboxaldehyde 835-64-3
                                                       2834-92-6.
    1-Amino-2-naphthol 7446-70-0, Aluminum chloride, reactions
       (preparation of quinolinolatoaluminum complexes as organic
       electroluminescent materials)
OS.CITING REF COUNT:
                       1
                              THERE ARE 1 CAPLUS RECORDS THAT CITE THIS
                              RECORD (1 CITINGS)
L68 ANSWER 16 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER:
                        2000:222672 HCAPLUS Full-text
DOCUMENT NUMBER:
                        133:12007
TITLE:
                        Preparation and characterization of some
                        alumosiloxanes as single-source MOCVD precursors
                        for aluminosilicate coatings
AUTHOR(S):
                        Zemskova, S. M.; Haynes, J. A.; Besmann, T. M.;
                        Hunt, R. D.; Beach, D. B.; Golovlev, V. N.
CORPORATE SOURCE:
                        Oak Ridge National Laboratory, Oak Ridge, TN,
```

37831-6063, USA

Pr2/35-Pr2/42

SOURCE:

Journal de Physique IV: Proceedings (2000 ), 10 (Pr2, Chemical Vapour Deposition),

CODEN: JPICEI: ISSN: 1155-4339

PUBLISHER: EDP Sciences DOCUMENT TYPE: Journal LANGUAGE: Enalish

Entered STN: 07 Apr 2000 ED

AB Alumosiloxanes [Al(OSiMe3)3]2, (Me3SiO)2Al[OSi(OBu-t)3], [(acac)Al(OSiMe3)2]2, (Ox)A1[OSi(OBu-t)3]2, (Me = CH3; Bu-t = t-Bu; acac = C5H7O2; Ox = C9H6NO) were synthesized and their thermal properties were studied by TGA in Ar at 25-500°. [Al(OSiMe3)3]2 and [(acac)Al(OSiMe3)2]2 showed substantial volatility during heating regardless of their dimeric structures in the solid state, while the other compds. were largely decomposed under the same conditions. Therefore, [Al(OSiMe3)3]2 and [(acac)Al(OSiMe3)2]2 were chosen as prospective precursors for the MOCVD of aluminosilicate coatings. Study of these compds. by laser mass-spectrometry (laser excitation at 355 nm) showed that the decomposition pathway proceeds through the formation of a number of heavy species originating from dimeric [>Al<(OSi)2>Al<[ fragments of [Al(OSiMe3)3]2 and [(acac)Al(OSiMe3)2]2 mols. and Si-containing light species of m/z 52 (C2Si) and 55(C2H3Si) originating from OSiMe3 ligands. Initial expts. were carried out on the deposition of aluminosilicate coatings on Si carbide from the precursors described.

555-31-7, Aluminum triisopropoxide

(for preparation of alumosiloxanes)

555-31-7 HCAPLUS RN

CN 2-Propanol, aluminum salt (3:1) (CA INDEX NAME)

**●**1/3 A1

15710-92-6P

(preparation and reaction with tri(t-butyl)siloxane)

RN 15710-92-6 HCAPLUS

Aluminum, bis (2-propanolato) (8-quinolinolato-κN1,κO8)-, (T-4)- (CA INDEX NAME)

270903-75-8P 270903-76-9P

(preparation and thermal decomposition as potential solvent assisted MOCVD precursor for aluminosilicate coatings)

RN 270903-75-8 HCAPLUS

Aluminum, bis(trimethylsilanolato)[tris(1,1-dimethylethyl) orthosilicato-κO''']- (9CI) (CA INDEX NAME)

RN 270903-76-9 HCAPLUS

CN Aluminum, (8-quinolinolato-kN1,kO8)bis[tris(1,1-dimethylethyl) orthosilicato-kO''']-, (T-4)- (9CI) (CA INDEX NAME)

- IT 20009-02-3P 92784-84-4P (preparation, laser mass spectra and thermal decomposition as potential single-source MCCVD precursor for aluminosilicate coatings
- RN 20009-02-3 HCAPLUS

CN Aluminum, bis[ $\mu$ -(trimethylsilanolato)]tetrakis(trimethylsilanolato) di- (8CI, 9CI) (CA INDEX NAME)

RN 92784-84-4 HCAPLUS

CN Aluminum, bis(2,4-pentanedionato-KO,KO')bis[µ-(trimethylsilanolato)]bis(trimethylsilanolato)di- (9CI) (CA INDEX NAME)

- IT 148-24-3, 8-Hydroxyquinoline, reactions
- (reaction with aluminum triisopropoxide)
- RN 148-24-3 HCAPLUS
- CN 8-Quinolinol (CA INDEX NAME)



- CC 78-7 (Inorganic Chemicals and Reactions)
- IT Mass spectra

(laser; of alumosiloxanes as potential MOCVD precursors for aluminosilicate coatings)

IT Vapor deposition process

(metalorg.; preparation and characterization of alumosiloxanes as potential MOCVD precursors for aluminosilicate coatings)

IT Thermal decomposition

(of alumosiloxanes as potential MOCVD precursors for

- aluminosilicate coatings)
  II 107-46-0, Hexamethyldisiloxane 123-54-6, Acetylacetone, reactions
- 555-31-7, Aluminum triisopropoxide 2754-27-0,

Trimethylacetoxysilane 5356-87-6, Tri(tert-butoxy)silane

- (for preparation of alumosiloxanes)
- I 15710-92-6P
- (preparation and reaction with tri(t-butyl)siloxane)
- IT 270903-75-8P 270903-76-9P

(preparation and thermal decomposition as potential solvent assisted MOCVD precursor for aluminosilicate coatings)

IT 20009-02-3P 92784-84-4P

(preparation, laser mass spectra and thermal decomposition as potential single-source MOCVD precursor for aluminosilicate coatings  ${\sf Constant}$ 

- IT 148-24-3, 8-Hydroxyquinoline, reactions
- (reaction with aluminum triisopropoxide)
- OS.CITING REF COUNT: 1 THERE ARE 1 CAPLUS RECORDS THAT CITE THIS RECORD (1 CITINGS)
- REFERENCE COUNT: 14 THERE ARE 14 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE

#### RE FORMAT

L68 ANSWER 17 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1995:547736 HCAPLUS Full-text

DOCUMENT NUMBER:

123:69921 ORIGINAL REFERENCE NO.: 123:12237a,12240a

TITLE:

LANGUAGE:

Manufacture of organic electroluminescent device

INVENTOR(S): Sato, Yoshiharu; Kanai, Hirovuki PATENT ASSIGNEE(S): Mitsubishi Kagaku KK, Japan

SOURCE: Jpn. Kokai Tokkvo Koho, 8 pp. CODEN: JKXXAF

DOCUMENT TYPE:

Patent Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT NO.	KIND	DATE	APPLICATION NO.	DATE
JP 07062526	A	19950307	JP 1993-205375	19930819
			<	
PRIORITY APPLN. INFO.:			JP 1993-205375	19930819

<--

Entered STN: 13 May 1995

AB The device is manufactured by forming the organic light-emitting layer on a substrate at 60-150°. The layer may contain a metal complex of 8hydroxyquinoline, which may be formed by vacuum vapor deposition. The device shows good heat resistance and emission stability for long periods.

2085-33-8, Tris(8-hydroxyquinolinato)aluminum

7069-05-8 13978-85-3.

Bis (8-hydroxyquinolinato) zinc 14642-34-3,

Tris(8-hydroxyquinolinato)gallium

(manufacture of electroluminescent device containing hydroxyquinoline metal complex)

2085-33-8 HCAPLUS RN

Aluminum, tris(8-quinolinolato-kN1, kO8) - (CA INDEX NAME)

7069-05-8 HCAPLUS

CN 8-Quinolinol, calcium salt (2:1) (CA INDEX NAME)



●1/2 Ca

RN 13978-85-3 HCAPLUS

CN Zinc, bis(8-quinolinolato-κN1,κ08)-, (T-4)- (CA INDEX NAME)

RN 14642-34-3 HCAPLUS

CN Gallium, tris(8-quinolinolato-κN1,κO8)- (9CI) (CA INDEX NAME)

IC ICM C23C014-24

ICS C09K011-06; H05B033-10; H05B033-14

CC 73-11 (Optical, Electron, and Mass Spectroscopy and Other Related Properties)

ST electroluminescent device hydroxyquinoline metal complex; deposition vacuum vapor electroluminescent film

IT Electroluminescent devices

Vapor deposition processes

(manufacture of electroluminescent device containing hydroxyquinoline metal complex)

IT 2085-33-8, Tris(8-hydroxyquinolinato)aluminum 7069-05-8 13978-85-3,

Bis(8-hvdroxvguinolinato)zinc 14514-42-2,

Tris(8-hydroxyquinolinato)indium 14642-34-3,

Tris(8-hydroxyguinolinato)gallium 15276-55-8 15956-38-4,

Tris(8-hydroxyquinolinato)scandium 16009-78-2,

Tris(8-hydroxyquinolinato)yttrium 67952-28-7,

Bis(8-hydroxyquinolinato)magnesium

(manufacture of electroluminescent device containing hydroxyquinoline metal complex)

OS.CITING REF COUNT: THERE ARE 1 CAPLUS RECORDS THAT CITE THIS

RECORD (1 CITINGS)

L68 ANSWER 18 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN

ACCESSION NUMBER: 1992:85311 HCAPLUS Full-text 116:85311

DOCUMENT NUMBER:

ORIGINAL REFERENCE NO.: 116:14527a,14530a TITLE: Forming highly anticorrosive thin films

INVENTOR(S): Minowa, Emiko; Kobayashi, Shiro; Ito, Masahiko;

Izumitani, Masakiyo PATENT ASSIGNEE(S): Hitachi, Ltd., Japan

SOURCE: Jpn. Kokai Tokkyo Koho, 8 pp.

CODEN: JKXXAF

DOCUMENT TYPE: Patent LANGUAGE: Japanese

FAMILY ACC. NUM. COUNT: 1

PATENT INFORMATION:

PATENT	NO.	KIND	DATE	APP	LICATION NO.	DATE
JP 0311	1553	A	19910513	JP	1989-247947	19890926
JP 0602	1343	В	19940323			
RIORITY APP	LN. INFO.:			JP	1989-247947	19890926

Entered STN: 06 Mar 1992 ED

AB The title process involves covering a substrate with a metal and an organic compound forming a compound insol, with the metal by elec, discharge in vacuo. Making magnetic disks, magnetic heads, optomagnetic disks, and electrolytic condensers is also claimed. A polyethylene substrate was treated with Co-Ni and dimethylglyoxime by magnetron sputter process at 1 + 10-3 Pa vacuum. 148-24-3, 8-Hydroxyquinoline, uses

(sputter coating with metals and, for highly

anticorrosive thin film formation)

RN 148-24-3 HCAPLUS

8-Ouinolinol (CA INDEX NAME)



PR

7429-90-5, Aluminum, uses

(sputter coating with organic compds. and, for highly anticorrosive thin film formation)

DM 7429-90-5 HCAPLUS

Aluminum (CA INDEX NAME) CN

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ICM C23C014-06
    ICS C23C014-12; G11B005-85; G11B007-26; H01G009-05
    38-3 (Plastics Fabrication and Uses)
    Section cross-reference(s): 42
    sputter coating metal org compd; anticorrosive thin
    film sputter coating; magnetic disk sputter
    coating; head magnetic sputter coating; optomagnetic
    disk sputter coating; elec condenser sputter coating
    ; cobalt nickel sputter coating; dimethylglyoxime sputter
    coating; polyethylene sputter coating
    Sputtering
        (coating by, of metal and organic compds.)
    Electric capacitors
       (manufacture of, sputter coating in)
    Recording apparatus
       (magnetic heads, manufacture of, sputter coating in)
    Memory devices
        (magnetic, disks, manufacture of, sputter coating in)
    Optical imaging devices
        (magneto-, disks, manufacture of, sputter coating in)
    Recording apparatus
        (optical disks, manufacture of, sputter coating in)
    9002-88-4P, Polvethylene
        (formation of highly anticorrosive metal-organic compound thin
       films on, by sputter coating)
    66-71-7, o-Phenanthroline 72-48-0D, Alizarin, derivs. 91-20-3,
    Naphthalene, uses 91-20-3D, Naphthalene, derivs. 95-45-4,
    Dimethylglyoxime 148-24-3, 8-Hydroxyquinoline, uses
    366-18-7, 2,2'-Dipyridine 463-56-9D, Thiocyanic acid, organic derivs.
    13408-62-3D, Ferricyanide, organic derivs.
                                                 13408-63-4D, Ferrocvanide,
    organic derivs. 27598-85-2, Aminophenol
        (sputter coating with metals and, for highly
       anticorrosive thin film formation)
    7429-90-5, Aluminum, uses 7439-89-6, Iron, uses
    7440-02-0, Nickel, uses 7440-25-7, Tantalum, uses
                                                         7440-27-9,
    Terbium, uses
                   7440-48-4, Cobalt, uses 7440-67-7, Zirconium, uses
    11101-13-6
        (sputter coating with organic compds. and, for highly
       anticorrosive thin film formation)
L68 ANSWER 19 OF 19 HCAPLUS COPYRIGHT 2010 ACS on STN
ACCESSION NUMBER:
                       1984:59650 HCAPLUS Full-text
DOCUMENT NUMBER:
                        100:59650
ORIGINAL REFERENCE NO.: 100:8997a,9000a
TITLE:
                        Metallic image production, and composite material
                        and treatment solutions for this process
INVENTOR(S):
                        Sasa, Nobumasa
PATENT ASSIGNEE(S):
                        Konishiroku Photo Industry Co., Ltd., Japan
SOURCE:
                        Ger. Offen., 50 pp.
                        CODEN: GWXXBX
DOCUMENT TYPE:
                        Patent
LANGUAGE:
                        German
FAMILY ACC. NUM. COUNT: 1
PATENT INFORMATION:
```

PATENT NO.	KIND	DATE	APPLICATION NO.		DATE
DE 3241980	A1	19830526	DE 1982-3241980	_	19821112
JP 58083846	A	19830519	JP 1981-181747		19811114
JP 01045896	В	19891005			
JP 58083843	A	19830519	JP 1981-181748 <		19811114
JP 01045897	В	19891005			
JP 58083847	A	19830519	JP 1981-181749 <		19811114
US 4455364	A	19840619	US 1982-439427		19821105
GB 2113152	A	19830803	GB 1982-32192 <		19821111
GB 2113152	В	19860917			
GB 2156088	A	19851002	GB 1984-28641 <		19841113
GB 2156088	В	19861126			
GB 2155861	A	19851002	GB 1984-28642 <		19841113
PRIORITY APPLN. INFO.:			JP 1981-181747 <	A	19811114
			JP 1981-181748 <	A	19811114
			JP 1981-181749 <	A	19811114
			GB 1982-32192	АЗ	19821111

ASSIGNMENT HISTORY FOR US PATENT AVAILABLE IN LSUS DISPLAY FORMAT OTHER SOURCE(S): MARPAT 100:59650

ED Entered STN: 12 May 1984

AB Metal images having outstanding edge sharpness in the etched segments are prepared from a composite material consisting of a support, a thin metal layer, a photosensitive resin layer, and 21 layer containing a metal chelating agent. The metal chelating agent may also be contained in a processing solution Thus, a poly(ethylene terephthalate) support was coated with an 800 Å layer of Al by wapor deposition and then with a composition containing methacrylic acid-styrene copolymer 5, pentaerythritol triacrylate 5, 2-isopropylthioxanthone 1, diethylaminoisoamyl benzoate 0.5 g, and Me cellosolve 100 mL to give a photosensitive layer. The resultant material was then imagewise exposed to a halftone original and developed in a 25° solution containing NaOH 4, Na anthraquinone-2,6-disulfonate (I) 10 g, and water 1 L for 30 s to show no scum formation and an excellent image corresponding the original. A control which used a developer containing no I showed heavy scum formation.

#### IT 12252-30-1

(photoimaging composition containing layer of, for metal image production)

RN 12252-30-1 HCAPLUS

CN Aluminum, compd. with iron (2:1) (CA INDEX NAME)

Component	 	Ratio	   I	Component Registry Number
	+		+	
Fe	1	1	1	7439-89-6
Al	1	2	1	7429-90-5

- IT 7429-90-5, uses and miscellaneous (photoimaging composition with layer of, for metal image production)
- RN 7429-90-5 HCAPLUS
- CN Aluminum (CA INDEX NAME)

λl

- II 148-24-3, uses and miscellaneous (photoimaging compns. containing, for metal image production)
- RN 148-24-3 HCAPLUS
- CN 8-Quinolinol (CA INDEX NAME)



- IC G03F007-00
- CC 74-10 (Radiation Chemistry, Photochemistry, and Photographic and Other Reprographic Processes)
- IT 64-02-8 100-51-6, uses and miscellaneous 853-68-9 1310-73-2, uses and miscellaneous 7664-38-2, uses and miscellaneous 7705-08-0, uses and miscellaneous 61702-43-0 (developer compns. containing, for metal layer-containing photoimacing composition)
- IT 853-67-8

(developer compns. containing, for metal layer-containing photoimaging compns.)

7440-69-9, uses and miscellaneous 12252-30-1

(photoimaging composition containing layer of, for metal image production)

IT 7429-90-5, uses and miscellaneous

(photoimaging composition with layer of, for metal image production)

- (photoimaging compns. containing, for metal image production) OS.CITING REF COUNT: 4 THERE ARE 4 CAPLUS RECORDS THAT CITE THIS

REFERENCE COUNT:

RECORD (4 CITINGS)

3

THERE ARE 3 CITED REFERENCES AVAILABLE FOR THIS RECORD. ALL CITATIONS AVAILABLE IN THE RE FORMAT

#### => d his nofile

L4

1.5

L13

(FILE 'HOME' ENTERED AT 09:37:24 ON 05 MAR 2010)

FILE 'HCAPLUS' ENTERED AT 09:37:36 ON 05 MAR 2010

- E BIS (HYDROXY-5-QUNOLYL) METHANE
- L1 1 SEA SPE=ON ABB=ON PLU=ON US20070190247/PN SEL RN

### FILE 'REGISTRY' ENTERED AT 09:38:12 ON 05 MAR 2010

20 SEA SPE=ON ABB=ON PLU=ON (1333-74-0/BI OR 15318-08-8/BI OR 19553-62-9/BI OR 20791-15-5/BI OR 310888-77-8/BI OR 310888-80-3/BI OR 310888-81-4/BI OR 310888-82-5/BI OR 310888-85-8/BI OR 310888-87-0/BI OR 7358-26-1/BI OR 7440-37-1/BT OR 7440-59-7/BT OR 75-24-1/BT OR 7727-37-9/BT OR 870126-56-0/BI OR 870126-57-1/BI OR 870126-58-2/BI OR 870126-59-3/BI OR 97-93-8/BI)

FILE 'HCAPLUS' ENTERED AT 09:42:18 ON 05 MAR 2010

L3 0 SEA SPE=ON ABB=ON PLU=ON "BIS(HYDROXY-5-QUNOLYL)METHANE"

FILE 'REGISTRY' ENTERED AT 09:52:12 ON 05 MAR 2010

E C19H17N2O2/MF

86 SEA SPE=ON ABB=ON PLU=ON C19H17N2O2/MF 0 SEA SPE=ON ABB=ON PLU=ON L4 AND HYDROXYQUIN?

L6 20 SEA SPE=ON ABB=ON PLU=ON L4 AND OUIN?

E C19H14N2O2/MF

1182 SEA SPE=ON ABB=ON PLU=ON C19H14N2O2/MF L7

L8 1 SEA SPE=ON ABB=ON PLU=ON L7 AND HYDROXYOUIN? 1.9

24 SEA SPE=ON ABB=ON PLU=ON L7 AND 8-QUIN? 11 SEA SPE=ON ABB=ON PLU=ON L9 AND QUINOLINOL? L10

L11 10 SEA SPE=ON ABB=ON PLU=ON L10 NOT 1H-INDOLE?

E 8-HYDROXYOUINOLINATE/CN L12 1 SEA SPE=ON ABB=ON PLU=ON 8-HYDROXYQUINOLINATE/CN

E 8-HYDROXYOUINOLINOL/CN

E 8-HYDROXYOUINOLINE/CN

1 SEA SPE=ON ABB=ON PLU=ON 8-HYDROXYQUINOLINE/CN 685 SEA SPE=ON ABB=ON PLU=ON 148-24-3/CRN L14 L15 9 SEA SPE=ON ABB=ON PLU=ON 16582-16-4/CRN

L16 0 SEA SPE=ON ABB=ON PLU=ON 856949-35-4/CRN L17 0 SEA SPE=ON ABB=ON PLU=ON 848290-21-1/CRN

L18 0 SEA SPE=ON ABB=ON PLU=ON 444149-04-6 /CRN

0 SEA SPE=ON ABB=ON PLU=ON 128500-72-1/CRN T.19 L20 0 SEA SPE=ON ABB=ON PLU=ON 97970-36-0 /CRN 2 SEA SPE=ON ABB=ON PLU=ON 63969-39-1/CRN 1.21

L22 1 SEA SPE=ON ABB=ON PLU=ON 61924-02-5/CRN L23 0 SEA SPE=ON ABB=ON PLU=ON 13292-19-8/CRN L24 O SEA SPE=ON ABB=ON PLU=ON 13222-06-5/CRN

1,25 34 SEA SPE=ON ABB=ON PLU=ON 2536-71-2/CRN L26 664194 SEA SPE=ON ABB=ON PLU=ON (AL OR GA OR ZN)/ELS

122588 SEA SPE=ON ABB=ON PLU=ON L26 AND CCS/CI L27 T-28 541606 SEA SPE=ON ABB=ON PLU=ON L26 NOT L27

L29 541606 SEA SPE=ON ABB=ON PLU=ON L28 OR L28

D 300000 RN

L30 300000 SEA RAN=(173475-42-8) SPE=ON ABB=ON PLU=ON L28 OR L28

1.31 241606 SEA SPE=ON ABB=ON PLU=ON L29 NOT L30

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FILE 'HCAPLUS' ENTERED AT 10:03:34 ON 05 MAR 2010
L32 30 SEA SPE=ON ABB=ON PLU=ON L12
L33
        10124 SEA SPE=ON ABB=ON PLU=ON L13
L34
         1839 SEA SPE=ON ABB=ON PLU=ON L14
L35
            3 SEA SPE=ON ABB=ON PLU=ON L21
L36
             7 SEA SPE=ON ABB=ON PLU=ON L25
           60 SEA SPE=ON ABB=ON PLU=ON L11
L37
L38
       143270 SEA SPE=ON ABB=ON PLU=ON L27
L39
        140282 SEA SPE=ON ABB=ON PLU=ON L30
       2256613 SEA SPE=ON ABB=ON PLU=ON L31
L40
L41
          2571 SEA SPE=ON ABB=ON PLU=ON (L32 OR L33 OR L34 OR L35 OR
               L36 OR L37) AND (L38 OR L39 OR L40)
L42
               OUE SPE=ON ABB=ON PLU=ON CHEMICAL VAPOR DEPOSIT? OR
               CHEMICAL VAPOUR DEPOSIT? OR CVP OR VAPOR DEPOSIT? OR
               VAPOUR DEPOSIT?
            27 SEA SPE=ON ABB=ON PLU=ON L41 AND L42
L43
               E VAPOR DEPOSITION PROCESS/CT
       247082 SEA SPE=ON ABB=ON PLU=ON "VAPOR DEPOSITION PROCESS"+PFT,
L44
              NT/CT
            28 SEA SPE=ON ABB=ON PLU=ON L41 AND L44
L45
L46
            31 SEA SPE=ON ABB=ON PLU=ON L43 OR L45
               QUE SPE=ON ABB=ON PLU=ON FILM? OR THINFILM? OR LAYER?
L47
               OR OVERLAY? OR OVERLAID? OR LAMIN? OR LAMEL? OR (MULTILAYER
               ?) OR SHEET? OR LEAF? OR FOIL? OR COAT? OR TOPCOAT? OR
               OVERCOAT? OR VENEER? OR SHEATH? OR COVER? OR ENVELOP? OR
               ENCAS? OR ENWRAP? OR OVERSPREAD?
            30 SEA SPE=ON ABB=ON PLU=ON L46 AND L47
L48
           130 SEA SPE=ON ABB=ON PLU=ON (L32 OR L33 OR L34 OR L35 OR
L49
               L36 OR L37) (5A) L47
1.50
            5 SEA SPE=ON ABB=ON PLU=ON L49 AND L42
L51
            5 SEA SPE=ON ABB=ON PLU=ON L50 AND L41
L52
           30 SEA SPE=ON ABB=ON PLU=ON L48 OR (L50 OR L51)
          18 SEA SPE=ON ABB=ON PLU=ON L52 AND (1840-2006)/PRY,AY,PY 565 SEA SPE=ON ABB=ON PLU=ON L41 AND L47
L53
L54
L55
           27 SEA SPE=ON ABB=ON PLU=ON L54 AND L44
L56
            0 SEA SPE=ON ABB=ON PLU=ON L55 NOT L52
L57
            16 SEA SPE=ON ABB=ON PLU=ON L55 AND (1840-2006)/PRY, AY, PY
    FILE 'REGISTRY' ENTERED AT 10:30:36 ON 05 MAR 2010
            16 SEA SPE=ON ABB=ON PLU=ON L2 AND M/ELS
L58
    FILE 'HCAPLUS' ENTERED AT 10:31:06 ON 05 MAR 2010
L59
         23254 SEA SPE=ON ABB=ON PLU=ON L58
L60
          1415 SEA SPE=ON ABB=ON PLU=ON L59 AND L42
L61
          1210 SEA SPE=ON ABB=ON PLU=ON L60 AND L47
             1 SEA SPE=ON ABB=ON PLU=ON L61 AND (L32 OR L33 OR L34 OR
L62
               L35 OR L36 OR L37)
             1 SEA SPE=ON ABB=ON PLU=ON L60 AND (L32 OR L33 OR L34 OR
1.63
              L35 OR L36 OR L37)
            49 SEA SPE=ON ABB=ON PLU=ON L59 AND (L32 OR L33 OR L34 OR
L64
              L35 OR L36 OR L37)
1.65
            1 SEA SPE=ON ABB=ON PLU=ON L64 AND L42
L66
            19 SEA SPE=ON ABB=ON PLU=ON L53 OR L62 OR L63 OR L65
            0 SEA SPE=ON ABB=ON PLU=ON L57 NOT L66
L67
L68
            19 SEA SPE=ON ABB=ON PLU=ON L66 OR L57
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